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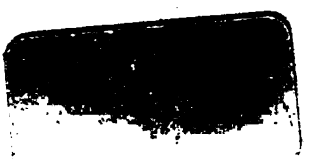

THE

RICHMOND AND LOUISVILLE

MEDICAL JOURNAL.

E. S. GAILLARD, M. D.,

Editor and Proprietor.

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VOLUME XIX.

LOUISVILLE:

Medical Journal Book and Job Steam Printing House, 104 *Green Street.*

1876.

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THE RICHMOND AND LOUISVILLE

MEDICAL JOURNAL.

VOL. XIX. JANUARY, 1875. No. 1.

ORIGINAL COMMUNICATIONS.

"Qui docet discit."

ART. I.—YELLOW FEVER IN MARSHALL, TEXAS. By JOHN H. POPE, M. D., Marshall, Texas.

Marshall is in latitude 32° 29′; its altitude is 247 feet above Shreveport, La., and 451 feet above the level of the sea. The city is built on the dividing ridge between the waters of the Red and Sabine rivers. The soil is sandy with clay foundation. In the washed hillsides, we find iron pyrites and conglomerate iron in abundance. The timber is pine on the west and south, and oak, black jack, and hickory on the east and north sides. The water used is nearly all from wells of average depth of thirty-five feet; and almost always contains iron in one or another combination. The public square (which we will take as one of the landmarks to guide us in this description) is the centre and highest point of that part of the city with which we have to do. From here the surface is almost level toward the north and northwest, but toward the west, south and east ravines radiate and broaden and deepen until they merge into a valley some two hundred yards wide, between a quarter and a half mile from the public square. The stream

that runs through this valley overflows with every hard rain; the marshes hold water until our summer drought. The natural drainage of the city is good, but in some places has been interfered with by throwing brush into the ditches to prevent washing into gullies. We have no board of health, nor city physician. The city is not compactly built, and has been described as "appearing rather like a collection of country residences than a city."

The population, in September 1872, was about 4,000, nearly half being negroes. Up to this date, Marshall had never been visited by an epidemic of any kind. She had never used any extra precautions to prevent it. In 1857, more than one case of yellow fever came here, was sick here for some time, and died. The disease did not spread. This is reputed to be one of the healthiest localities in Eastern Texas. We have intermittent and remittent fever during the summer and autumn; and these are almost confined to the south and east portion of the city. We shall soon see that the north and northeast portions constituted the infected district. Now let us see what, if any, were the differences in local conditions before and during 1873—especially in the infected district, and the local differences between other parts of the city and the infected district.

During the twelve months, ending September, 1873, there were added to the population of Marshall about two thousand, a large majority of which was from a more northerly climate. There was also a transient population of several hundred—chiefly railroad laborers. Nearly all of these new comers took up their abode in the same part of the city—viz., between the public square and the T. & P. railway dépôt, and around the latter locality, which is a half mile northeast of the former. This created a demandf or numerous boarding-houses, restaurants and dormitories—all in the same neighborhood. Many of these houses were of the lowest class—cleanliness secondary to even the proprietors' godliness. During the autumn of 1872 and the following winter, large excavations were made near the

dépôt, requiring the removal of 60,000 cubic yards of dirt; but all of this was finished before the close of freezing weather. The cemetery is between the dépôt and public square, but a committee of physicians appointed to examine the locality found nothing about it detrimental to health. On the first block northeast of the public square was a repository for beef hides. The offensiveness of this particular locality was, at times, almost unbearable during the summer season. This evil was remedied a short time before the advent of the fever. Near this spot was the city market, which, to all appearances, was well kept. Physicians had occasion to call the attention of authorities to nuisances much more frequently in this portion of the city than any other.

At the outbreak of yellow fever in Shreveport, hundreds of the citizens came pouring into Marshall and the country adjacent. Of those who sought refuge in Marshall, the greater number found accommodations in that quarter of the city north and northeast of the public square. No quarantine was established against Shreveport until the 28th of September, and then it was impossible to make it effective. Many of the refugees from Shreveport were sick soon after their arrival, all the cases presenting, more or less, symptoms of yellow fever. I select the following as more plainly marked than the average:

Miss G. came from Shreveport on the 2d of September; was taken sick on the 3d with violent pain in frontal and occipital regions and in back and limbs. Considerable anxiety and nervous excitement; face flushed; eyes injected; tongue and fauces very red; pulse 110; bowels constipated; urine sufficient in quantity, of deep amber color, and had no deposits. Dr. Eads, her physician, gave mercurial purge, followed by large doses of quinine combined with a small quantity of morphine. There was gradual subsidence of fever, as denoted by pulse and skin, and patient was discharged, convalescent, on fourth day. She was, soon afterward, removed from this house, and we saw nothing more of her. Dr. Marks, however, tells me that, about two or three weeks after the above date, he was called to see

her for an obstinate bleeding of the gums and general debility. He is certain she was suffering from the effects of an attack of yellow fever. When first taken sick, she occupied a house two hundred yards northwest of the square. The house to which she moved was about the same distance north of the square. In this last house I saw Mr. L. on the 5th of September. He had come from Shreveport on the 3d; had a chill on the 5th; and, when I saw him, was perspiring profusely, after a hot mustard-bath and wrapping in blankets. His symptoms did not point particularly to yellow fever, but I rather thought it an intermittent attack; so I ordered him a scruple of quinine, to be taken within the next twenty-four hours. I heard no more of him. All the cases from Shreveport presenting any symptoms of yellow fever, up to the 6th or 7th of September, were, so far as I learn, north of the public square.

On September 7, Mr. J. D., aged eighteen, rode on horseback into Marshall from six miles in the country, where he had been since his flight from Shreveport, the last of August. He had been "feeling badly" a day or two. He took quarters two hundred yards south of the public square. Dr. Eads saw him the night of the 7th. He had a wild, staring look; face congested; eyes red and suffused; skin very hot and dry; pulse full, strong, and 140 to the minute; severe pain in head, lumbar region, and in epigastrium on pressure; slight nausea; tongue coated white in centre with red edges and tip; fauces, gums, and buccal mucous membrane very red; bowels constipated; kidneys acting well; urine saffron-colored. Ordered six ounces sol. cit. magnesia; repeat in two hours if bowels do not act. Sulph. quinia, grs. v., every two hours, to cinchonism; ice *ad lib.*

Second Day.—Bowels acted after the second dose of magnesia. Required two scruples of quinine to effect cinchonism. Skin still very hot, but moist; pulse 128. Other symptoms much the same as yesterday described by Dr. Eads. Eyes have a dark yellow cast. Continue ice; apply mustard to epigastrium and lumbar region.

Third Day.—Skin distinctly yellow; pulse 110. Patient inclined to sleep, but is easily aroused and answers rationally; kidneys still secrete sufficient quantity; no chemical analysis; increase of nausea; stomach emitting a glairy mucus. Mustard temporarily relieved pain. Gave as diuretic, flaxseed tea and sweet spts. nitre; as nourishment, chicken soup.

Fourth Day.—Yellowness more distinct; greater tendency to somnolence. Patient is weaker; nausea increased. Continued treatment of yesterday.

Fifth Day.—Gradual increase in gravity of symptoms; harder to rouse up; wants to get out of bed when awakened; talks irrationally; less urine; not so much nausea; pulse weaker and 140 to the minute. Takes beef-tea and brandy by mouth. Died at end of fifth day. No urine passed for eight hours.

None of the family with whom this young man stayed contracted the fever. They never went to his room, and were generally absent from the house. The disease did not spread in this part of the city.

CASE II.—Mr. C. W., aged twenty-five; express messenger on T. & P. railroad; made several trips into Shreveport after yellow fever was declared epidemic there. Have no knowledge of exposure by contact to any particular case or any particular date. Had chill November 8th; no premonitory symptoms. This was on the train near Dallas. He returned to Marshall, where Dr. Marks saw him the second day of his illness. Had hot, dry skin; tongue clean and moist, with red tip; nausea and vomiting; expression anxious; eyes suffused, yellow and injected; urine normal in quantity, but high colored; bowels constipated; pain in head and back; and think he complained of tired feeling in his limbs. On the sixth or seventh day he vomited a small quantity of black, flaky substance in a brown-colored fluid. Pronounced convalescent on the eighth or ninth day. Pulse became quite weak; skin cool and moist. Ordered stimulants and nutritious diet.

On the —— day there was rise of fever, which ran a course

somewhat similar to typhoid fever. During this stage delirium came on, and was of that peculiar character seen in delirium tremens. Complained of pain in umbilical region; had no tympanitis. Convalescence from this fever began on the seventeenth day, and was more rapid than is usual after typhoid fever. No one at this house contracted the fever, and there is no evidence of spread of the fever directly from this case. The locality was nearly two hundred yards due east from the public square.

CASE III.—W. S., aged twenty-eight; native of Arkansas or Missouri. Has lived in Marshall about a year, and has always enjoyed good health. He had, when taken sick, charge of a large billiard hall in the upper story of a brick building on the eastern border of the public square. This and Case IV. being the first of our citizens attacked, our Medical Society appointed a committee of Drs. E. P. M. Johnson, Eads, and Marks to investigate their origin. They reported no evidence to show that Case III. was ever exposed to any other case of yellow fever. The evidence bearing on Case IV. will be given in its proper order. Mr. S. lived, night and day, in the billiard hall and adjoining room. On September 19th he had a severe chill, and a few hours thereafter Dr. Eads saw him. He was suffering intense pain in back, head, and limbs, and in epigastrium on pressure; expression anxious; eyes red and suffused; skin dry and hot; pulse 140; temperature not taken; bowels obstinately constipated; urine too small in quantity; no tests applied first or second day. Gave mercurial cathartic, to be followed by quinine.

Second Day.—No abatement of any of the symptoms, pain as intense and constipation as obstinate; skin very hot and slightly moist; surface of face has a dusky hue; eyes dark-yellow; tongue heavily coated with a brownish fur; gums red and swollen. Gave sol. magnesia cit., f℥xij., to move bowels; ice to be used freely, and face and head bathed in cold water; five-grain doses of quinine every two hours.

Third Day.—Bowels moved by enema; urine in small quan-

tity, dark color, and highly albuminous; pulse getting weaker and little less frequent; takes very little nourishment on account of nausea and vomiting, which gets worse each day.

Fourth Day.—Symptoms all aggravated; suppression of urine; beginning of black vomit and active delirium.

Fifth Day.—Furious delirium; black vomit continues at intervals. When his delirium is wildest, three strong men can not hold him in bed. He died to-day. When being shrouded, his friends noticed several dark ecchymosed patches on the sides of his neck and shoulders.

CASE IV.—H. R., a German, twenty-five or thirty years of age. He has lived in this town and county several years. He is very dissipated; keeps a grocery-store and bar-room in the lower story of the building occupied by Case III. The committee, spoken of above, report abundant evidence to prove that this man was trying to get a conveyance to smuggle lemons, etc., from Shreveport to this place while the epidemic was raging there. Besides this, Dr. E. M. P. Johnson tells me he has evidence, entirely satisfactory to him, that Case IV. did visit Shreveport, and on his return, was accompanied by a lewd woman of that place, whom he visited several times after arriving in Marshall. The date of this alleged exposure was from four to ten days prior to his sickness. There is no positive evidence as to what goods he brought from Shreveport, but the probabilities are that he brought lemons among other groceries, and that Case III. purchased and handled some of them. Case IV. was taken with a chill on the 3rd of September; fever lasted forty-eight hours, when it seemed to leave him with a cool, moist skin; mind clear; pulse 70. He expressed himself as feeling well again, and, contrary to his physician's caution, got out of bed to wait on customers.

On the third day, a "friend" called early, and advised some Limburgher cheese, which the patient took, and soon had black vomit, and died during this twenty-four hours.

Thus began the epidemic among the citizens of Marshall. I will not attempt to detail each of the reported cases, but

will trace the advance and recession of the epidemic, by dividing the time into periods of seven days each. I will give the number occurring in each period or stadium, the death rate, etc. Will then give some of the signs and symptoms oftenest noticed, and most relied on by our physicians for diagnosis, especially of doubtful cases. The number of cases reported for each stadium does not refer to the total number of sick (with yellow fever), but to the number of new cases, or those first seen by a physician during this period.

We will say the epidemic had its beginning September 19th with Case III. The number of refugees here from Shreveport would at least balance the number of our citizens that had left Marshall. So we will call the population at this time 6,000, about half being blacks.

From the 19th to the 26th of September (first stadium), there were four attacked, all white; three male, one female. Two deaths, both with black vomit; in one of which it was preceded by suppression of urine; two acclimated; two not. All in the infected district.

Second Stadium.—Population about 5,000; four cases, all white; two male, two female. There seemed to be a remission between the first and second stadia. Physicians felt justified in hoping the disease was not epidemic. Three of the cases, for several days, wanted the characteristic symptoms of yellow fever. One of these was one block north, and two were two blocks further northeast of the billiard hall (Cases III. and IV). We were having occasional showers, with oppressive heat after each, and every few days a cool change.

Third Stadium.—The fever confined itself to the north and northeast portions of the town. The population of this district was now less than 1,000. Thirteen cases, all white; two female; nine acclimated. Four deaths; two with black vomit; one with suppression of urine; one, unknown. Two of the cases were three blocks northeast of the billiard hall, and five were at the Bethea boarding-house, two blocks northeast of the hall, and next door to two of the cases mentioned in the

second stadium. One case was on same block as the hall, but one hundred yards farther north. Two of the cases were near the T. & P. railroad dépôt, several hundred yards from any previous cases. They had been communicating freely with the infected district. Two were one-fourth of a mile northwest of the square. The last two had been boarding in or near the Bethea House. The disease did not spread in the locality to which they removed. During this week, people scattered from the infected district to various parts of the city and to the country, leaving, at end of this stadium, not more than five hundred. Most of those remaining were acclimated.

Fourth Stadium.—Thirteen cases, all whites; one female; four acclimated. Six deaths; three with black vomit; one of which was associated with suppression of urine; one death from suppression alone. All but three of these cases were north, northeast, and east of the billiard hall. One died in the country that had removed from the infected district (out of a boarding-house where a case had died) to a healthy locality. Two cases were one block west of the square, both of which had their place of business in the infected district, which they frequented during the day.

There were doubtless other cases of genuine yet low fever during this stage of the epidemic, but they came under the care of quacks, and men whose opinions on medical subjects are worthless. The proportion of cases thus left out of the report is, however, small.

Fifth Stadium.—October 17th to 24th there was a cold, continued rain nearly all of the week; population of the infected district about two hundred and fifty or three hundred; number of cases twenty-nine; twenty-six white, three colored, fourteen acclimated; fifteen recoveries; two deaths from suppression of urine; one from black vomit; four with black vomit and suppression combined. All but three of the cases were in the infected district; of these three, one was half a mile northwest, and one a block south of the square. The latter had his place

of business near what seemed to be the centre of the infected district. The fever did not spread from these cases.

Sixth Stadium.—Population about the same; seventeen cases, all white. Two female, fifteen male; eleven not acclimated; four deaths; one with suppression and black vomit combined; two with suppression alone. All these cases were more or less exposed in the infected district up to the day of attack. There was a white frost and cold northeast rain during this week.

Seventh Stadium.—From October 31st to November 7th five cases; four white males; one black female; two acclimated; one with black vomit. One of the recoveries had black vomit. Three of the cases were in the infected district. All had been exposed to the infected district. It did not spread from those who were sick elsewhere. During the latter part of the week a considerable number of refugees returned. There was a frost on the 16th of November, and clear cold weather followed.

Eighth Stadium.—November 7th to 14th three cases; all males; two black and one white; two acclimated; two deaths; one of them with suppression of urine, and one I don't know. One of the cases was exposed eight or ten days before his attack to a case in the south edge of the town (not infected district). He left the house and moved to town, south of the square, and died of yellow fever. No other cases can be traced to where it is believed this one was contracted; and yet there are others just as much exposed, and apparently no more protected. Another case (Henry Franklin, colored) lived away from the infected district, but the clothing of one who had died of yellow fever was taken to his house; on —— day he was taken with the fever and died.

Ninth Stadium.—Four cases, all white; one female; one death with hæmorrhage from bowels, gums and nose. Two of the cases had remained in the infected district during the entire epidemic, and one of them had nursed several cases. He had been frequently exposed to epidemics of yellow fever in

Mobile, Ala., but had never before had the fever. The female was six months pregnant; she had a mild, though protracted case, and did not miscarry. Two of the cases (Sloan and Clark) left the city early in the epidemic. Sloan came to town once or twice in daytime; and on the 27th of October he came and remained until the 31st; he slept in a room rather open, but which had not been specially ventilated, nor the bedding, etc., aired. This room was over a store that was, probably, more than any other frequented during the epidemic, being a general rendezvous for the citizens remaining in town. He was taken sick on the 14th of November, and had a well-marked case. Clark returned to Nashville a few days after Sloan; his place of business was at the same house, and he was frequently in the room above mentioned. He drank to excess several days before his attack; says he had the fever in Shreveport in 1861; at first it was thought this last attack might be from excessive dissipation. He had never before had any such attack as this from drinking. As the disease developed he had the yellowish hue of skin, and conjunctivæ, the tumefied gums that afterward bled; the black vomit stools; urine, when heated or acid applied, almost a solid coägulum. There was no record of temperature or pulse. He died with suppression of urine and hæmorrhages from various mucous membranes.

Tenth Stadium.—Beginning 21st of November; no new cases after the 23d. There were three cases, all white; two males; two acclimated; all recovered. One of the subjects was absent from the city until after frost. On returning, he occupied at night a room in the infected district that had not been aired. Another case remained in town during the entire epidemic; nursed a case of fever during the third, and another during the sixth stadium; both in well ventilated and comfortable rooms. He nursed Sloan seven days, ending 21st of November. This room was not comfortable, having no fire, and the weather was very cold. He remained here night and day, and was very much fatigued by his duties. On the 23d of

November he was attacked with unmistakable signs of the fever, but had a mild case.

Taking a review, we see the total number of reported cases was ninety-six, of which ninety were whites and six blacks. Fifty-eight were unacclimated, forty-three acclimated, and five unknown. The ratio of cases to total population was greatest among unacclimated; I would suppose about twice as great. The main distinction intended by acclimated and unacclimated is between those who came from northern or foreign climates within the past two years and those who have lived here longer. It has been impossible to arrive at the nativities. A large proportion was German, Irish and French. In addition to the reported ninety-six cases, there were enough others to raise the total number to one hundred and twenty-five. Many of these were mild cases at the beginning of the epidemic, and were not reported as yellow fever, and always recovered. This would lessen the rate of mortality, which would still be very great. Of the reported cases sixty recovered and thirty-six died. There were sixteen cases of black vomit, two of which recovered. Seven cases of fatal black vomit were associated with suppression of urine. Patients having black vomit were found with albuminuria whenever the urine was examined. There were seven cases of suppression without black vomit. Suppression, well marked, was always fatal.

There were some few signs and symptoms that we learned to rely upon more than others in *doubtful* cases. I say *doubtful* cases; for in well-marked cases the image and superscription of yellow fever were not to be mistaken. The anxious expression, the congested surface, the bright, glistening, suffused eyes, with injected conjunctiva; the torturing pain in frontal, occipital and lumbar regions, frequently extending the entire length of the lower limbs; pain also in epigastrium, especially on pressure; hot skin, and bounding pulse. These when found after exposure to yellow fever poison told the physician plainly what he had to deal with. But we found cases where many of the most prominent symptons were wanting. Never, however,

as far as I can learn, was there absence of red, tumefied gums, that, at a later period, ulcerated, and a hæmorrhagic oozing took place generally around the alveolar border. The pulse in uncomplicated cases fell from 140 to 120 per minute (first stop) to 50 or 60 after convalescence had set in. Several times it fell lower, and in one at least it went as low as 34. This last case was a man of weak constitution, never recovered even his usual health; and, finally, five months after the fever, he died with symptoms of softening of the brain. There were cases where the condition of the skin, eyes, tongue, pulse, urine, bowels, stomach, subjective symptoms when in recumbent posture—none of them gave any indication of disease of any kind. The patient would tell you he sent for you, fearing he was *"going to be sick"*; that he had "no other sign of it" than that he would get giddy if he sat up in bed, and if he attempted to walk across the floor or to dress himself, he would faint unless he could lie down quickly; but being in bed again, he soon felt perfectly well. Such cases required very close watching, little or no medicine, but rest.

As for treatment, I expect we tried everything from calomel, opium and quinine, up to a masterly inactivity. Nothing could be done to arrest the disease, but much toward warding off its bad consequences and relieving the suffering. For relief of pain, I have seen morphine administered and produce the worst effects, the patient becoming comatose in a few hours, and dying with symptoms of suppression. One of our physicians informs me that he frequently used paregoric with good effect. Counter-irritation was generally better than any of the anodynes for the relief of local pain. Ice was an excellent application for headache, nausea and vomiting. For the last two troubles, five-grain doses of bicarb. of soda seemed to do good, and a reliable physician says he was pleased with the effects of three-grain doses of oxalate of cerium. Of the black vomit cases that recovered, ice and bicarb. of soda was used in one, and these followed by subacet. of lead in the other. As *diuretics*, flaxseed tea and sweet spirits nitre had most favor. Va-

rious others were used. So-called *relapses* were of tolerably frequent occurrence. There was nothing distinctive in the second fever. It generally came on in those who were imprudent during convalescence, but the paroxysm was entirely different from that of true yellow fever. In some the fever came on without chill after fatigue or overeating; would last six or eight hours, and not return. No medicine given unless it were a laxative. Other cases were regular intermittent attacks, and quinine broke them. Others were cases of slow convalescence, on account of grave organic changes. During such protracted cases there was almost sure to be (sometimes more than once) some febrile excitement.

There were only two post-mortems during the epidemic. I. had lived for some time in a house where several had died, and more were sick with the fever. He was a farm laborer; was forty-five years old, though his gray hair and whiskers would indicate a man of sixty; muscular and active; about twenty days after the fever was carried to the house, he began to complain, lay down all the time, but said he was not sick enough to take medicine; scarcely spoke to any one, unless questioned, and then in monosyllables; and if talked to much, manifested impatience by turning away from you. This was not his natural disposition; nothing peculiar in expression of face; pupils, both natural; orcus similis in both eyes; tongue had thick, white, creamy coating, with red tip and edges; bowels constipated; no urine known to have been passed for twelve hours. (This was the second or third day of his complaining). Skin cool and moist, pulse 80, temperature not taken. He was given mercurial purgatives at night. His physician (Dr. F. H. Johnson) saw him the next morning, and tells me he was much the same as at our visit the day before.

A few hours after this last visit Dr. J. was again summoned in haste. The patient had taken nothing but the previous night's receipe. He had fallen in attempting to walk across the floor, and was now almost pulseless, cool surface, comatose; evidently moribund. A draught of whiskey and quinine was

given. He died during the morning. About 4 o'clock P. M. same day we made post-mortem. Unfortunately we were very much hurried, as the family insisted on burying him "right away." Rigor mortis considerable; no signs of bruises; skin not naturally yellow; tissues cool; muscles red and healthy-looking; adipose tissues unusually yellow; bowels of leaden hue, not much distended; stomach full of gas, and small quantity of greenish-colored liquid, thought to be almost entirely the quinine and whiskey. The liver, all over, was of that yellow color that I was always taught to regard as a sign of fatty degeneration. I have frequently seen almost the same color (but circumscribed) on the liver of patients dying with chronic dysentery. An incision showed this organ to be almost bloodless, but when squeezed between the fingers, the cut surface would show large drops of blood at some distance apart. We were surprised, when opening the abdominal cavity, to see a large dark clot of semi-coägulated blood immediately below the right lobe of the liver. We are sure this was not post-mortem from cutting any large blood-vessel. Before further examination of this, we opened the thorax, and found signs of fatty degeneration in the muscular walls of the heart; lungs had healthy appearance. There was bulging upward of the diaphragm immediately above the position of the afore-mentioned clot. We carefully cut away the diaphragm, from left to right, and found the clot extended behind and above the liver, between it and the diaphragm.

The clot was so interwoven with the portal vessels and the broad ligament of the liver, that we cautiously undertook to remove the entire organ, to better examine it. After separating attachments and preparing to sever the portal vessels below the clot, they broke at their point of bifurcation to the two lobes. No traction was being made except by the weight of a part of the clot, which must have been a very slight force. We were stopped before satisfying ourselves on this point. The examination made discovered no sign of aneurismal sac, nor atheromatous degeneration of any of the blood vessels. The blad-

der contained about an ounce of very turbid whitish urine. The brain was not examined.

Case II. died second day of disease with suppression of urine and black vomit; post-mortem three hours after death, at which Dr. Brooks was present with me. We found skin yellow; rigor mortis considerable; tissues very warm; muscles red and healthy-looking; adipose tissues very yellow; liver and heart of same yellow color that was found in Case I.; kidneys paler than natural, and rather flabby; in the pelvis of one of them was an ecchymosed-looking spot one-fourth of an inch long and two lines broad; bladder contained a small quantity of turbid urine, and the stomach a pint or more of black vomit material. The blood taken from large vessels near the heart was of scarlet color. I collected some in a small vial and put it in a cool place for twelve hours, at the end of which time it looked slightly congealed, but was easily shaken into a fluid state again. I dropped some of the blood on filter paper, but could detect no yellow stain on the border of the blot.

The following cases present some points of special interest:

CASE I.—Mrs. R. lives one mile south of town; she visited Mrs. H., who was very ill with yellow fever, in the infected portion of the town; she remained not more than one hour; kissed her on leaving, and was not again exposed to yellow fever poison. Eight days thereafter she was attacked with yellow fever at her home. The case was a mild one. Her husband, who nursed her, was taken with a mild form of fever, but his physician was doubtful about its exact character. He was, however, inclined to the opinion that it was yellow fever. The husband's attack came on about one week from first exposure. Nearly every member of the family in succession had a mild form of fever. It did not spread in the neighborhood.

CASE II.—Miss M. visited the same case Mrs. R. did, and about the same time returned to her home west of town; was attacked with yellow fever within a day or two of Mrs. R., and died with black vomit. The balance of the family removed

from the house immediately. None of them had the fever, and there was no spread of it in the neighborhood.

I should remark that the room in which Mrs. H. (to whom both of the above cases were exposed) was sick was extremely oppressive on account of the exhalations from her body; in fact, so putrid was this odor that some of the friends were incredulous as to its source, and some of the ceiling was removed to look for dead rats.

CASE III.—Mrs. P. was exposed almost exactly as the above two, except that she lived a little nearer the infected district. Period of incubation about same.

I examined chemically between forty and fifty specimens of urine from yellow fever patients. Albumen found in thirty-seven, and these were almost universally the worst cases. Every case of black vomit had albuminuria. The naked eye-appearance of fifty-five specimens was noted down as "like muddy cider," when shaken up, a copious sediment, more or less colored, soon settling to the bottom when agitation ceased. This deposit was examined, chemically and microscopically, in twelve of the specimens, and always found to consist of urates of ammonia and soda.

I must express my indebtedness to Drs. E. P. M. and F. H. Johnson, Eads, Marks, Thomas, and Brook for reports of their cases, and for other valuable assistance in putting on record the history of our epidemic.

ART. II.—QUININE IN UTERINE CONCEPTION. By J. S. WETHERLY, M. D., Montgomery, Ala.

A great many articles have been written within the last five years upon the ecbolic effects of quinine. Nearly all of these articles, if my memory serves me correctly, were written for the purpose of proving that quinine does act upon the pregnant uterus in such a way as to force it to expel its contents; and

that, consequently, it should not be administered to females who are pregnant, or if given at all, it should be given with great caution, even if the patient be suffering from malarial fever. This opinion has been communicated to the laity by physicians, creating a prejudice against its use in certain cases.

I have been induced to write this paper from the fact that I fear great harm is likely to result from classing this indispensable drug under a head to which I am satisfied, from personal observation, that it does not belong.

False facts in medicine are worse than false theories. We have enough of both. I have been prescribing quinine for the last twenty-five years, and I am satisfied that it will much oftener arrest uterine action than it will produce it. I do not mean that it will control active labor pains, but in those irregular or neuralgic pains which are frequently produced by malarial poisoning, a full dose, or several full doses, will almost invariably arrest them, just as morphine will do under the same circumstances. The woman rests, and also the womb; and if it is about her full time, when the pains return, she will probably be delivered without trouble and immediately. Reasoning from wrong premises, it is announced that quinine or morphine has acted as an ecbolic, when, in fact, the action has been the very opposite.

Some years since, this question was up for discussion before our local Society, and a committee consisting of Drs. J. B. Gaston, W. O. Baldwin, and R. F. Michel was appointed to experiment with quinine upon pregnant animals. Dr. Gaston has kindly furnished me with the following report of the experiments, and also of some cases treated by himself about the same time:

MONTGOMERY, ALA., Sept. 3, 1874.

J. S. Wetherly, M. D.:

Dear Doctor,—The experiments, made in 1870, of which you have requested a statement, were as follows:

1. Six grains of sulphate of quinine were given to a white woman, three months advanced in pregnancy, every two hours

until thirty grains were taken. The same quantities were given at the same intervals on the following day. There were no uterine contractions, no hæmorrhage, and no other perceptible effects, except the indications of intense cinchonism. This woman was married, the mother of two children, and about twenty-eight years old.

2. Ninety grains of sulphate of quinine were given to a negro woman, two and a half months advanced in pregnancy, in three successive days—thirty grains each day in doses of six grains at intervals of two hours. Effects the same as in the preceding case.

The aforesaid women were very willing subjects of experiment; and I watched them closely, ready at any time to suspend the quinine if uterine pain had been excited.

3. A committee of three—Drs. J. B. Gaston, W. O. Baldwin, and R. F. Michel—appointed for the purpose by the M. M. and S. Society, made a series of experiments on a pregnant bitch, as follows:

(*a*) Ten grains of sulphate of quinine, in solution, were injected hypodermically.

(*b*) Fifteen grains of sulphate of quinine were administered in the same way.

(*c*) Twenty grains were administered as before.

These and other similar experiments with still larger quantities of quinine were made on different but not always on successive days, with no other than the locally irritant and general poisonous effects of quinine, until they killed the animal.

Yours, etc., J. B. GASTON, M. D.

I could furnish quite a number of cases occurring in my own practice during the last twenty-five years, but will content myself with the report of four cases which I think ought to be regarded as typical:

About two years since a professional friend asked me to see his wife, stating that she had been suffering from an attack of intermittent fever for about ten days; that she was some months advanced in pregnancy; that she had miscarried several times

at or about the seventh month, and that she was now very seriously threatened with premature labor. He also said that he had refrained from the use of quinine during this attack of fever from the fact that he believed it excited uterine contractions. He and his wife were both anxious that she should go to full term and be delivered of a living child. Instead of quinine, he had been using morphine freely, also chloral, and some domestic remedies for the purpose of preventing the daily occurrence of the chill and fever, none of which were, however, successful, and the exacerbation came on regularly every day, and with each exacerbation an increase of uterine pains. On seeing the patient, I found her with high fever, very restless, notwithstanding that she was completely under the influence of opium. Strong uterine pains were coming on every few minutes. On inquiry, I found that these pains came on with every exacerbation of fever, but that they were much more severe on that evening than any time previous. She informed me herself that she knew she was in labor. It was now 8 P. M., and I found uterine pains coming on very regularly every five or six minutes. On making an examination per vaginam, I found the os uteri dilated to the size of a silver half-dollar, soft, and still dilatable. I felt the child's head presenting covered by the membranes. I gave it as my opinion that the only agent that would be likely to prevent a premature delivery was quinine. Two other physicians were present with the husband, all entertaining the same opinions as to the ecbolic effect of quinine. They all objected to my supposition at first, but finally consented that I should have my way that night. I consequently ordered—

℞—Quinine, grs. xx.;
Chlo. Hydrarg., grs. iv.,

To be divided into two powders; one to be given at 12 o'clock at night, and the other one at 6 next morning. She took the prescription as directed, and the next day she had no fever or pains.

The following night the same prescription was repeated, and

three grains of quinine ordered every morning afterwards until frost. She had no more trouble, came to full term, and was delivered of as fine a specimen of a boy as I ever saw. I feel perfectly sure that this lady could not have had another paroxysm of fever without delivery having taken place.

About two months since I was called to see Mrs. S., of this city. She was six months advanced in pregnancy. I found her suffering with what I at first supposed to be an attack of catarrhal fever, attended with quite severe uterine pains. I treated her with anodynes, without benefit, for two or three days, when I became satisfied that she had remittent fever; the uterine pains getting worse with every paroxysm of fever. At my afternoon visit (I think on the third day of her sickness), I found her suffering with severe and regular uterine pains; the uterus could be felt through the abdominal walls, getting low with every pain. A digital examination proved the os to be dilated sufficiently for the index finger to pass readily through the os, coming in contact with the head of the fœtus. I informed her husband that she would probably be delivered that night. I ordered quinine, grs. xx., and chlo. hydrarg., grs. iv., to be divided into two powders, one to be given at 12 o'clock and the other at 6 A. M.

The next day was passed in comparative comfort. The same prescription was repeated the two following nights with the effect of subduing both fever and pains. I have no doubt she will go to full term. She has continued to take the powders at intervals ever since her first attack, one or two of them always being sufficient to control the uterine pains, which have continued to annoy her at intervals ever since the first attack.

Soon after seeing this case, I was called to see a colored woman seven months advanced, who had been quite sick for several days with an attack of intermittent fever; she had, however, no uterine pains. I gave her the same prescription mentioned above. Her intermittent was soon controlled, and she was ordered to take quinine daily until she was confined.

Two weeks since I was called to a woman who said that she

was within two weeks of her confinement. She had quite a high fever with great tendency to congestion of the brain. She had had but one chill. I prescribed thirty grains of quinine for her, to be given at 12, 4, and 8 A. M. She had no more fever, and was delivered a day or two since at full term.

My opinion is, that fevers of any kind are apt to excite uterine action; that it is especially the case with malarial fevers; and if they are not promptly relieved, the uterus will expel its contents, whether quinine has been given or not. The uterine action is, however, never due to the quinine, but is the effect of the perturbed circulation and the malarial poison itself.

ART. III.—TAPPING THE BLADDER WITH ASPIRATOR. By W. M. DUNN, M. D., Indianapolis, Ind.

NOTE.—A most remarkable case.—ED.

On June 7, 1873, I was called to see Mr. A., and learned the following history of this (to me) very interesting case: He was a stout healthy-looking man, aged 43, of healthy parents. Had always lived an active out-door life. Sometime in the spring of 1872, while out driving, he was thrown from his buggy, lighting on his left hand and hip, sustaining a fracture of the wrist, and, as he supposed at the time, only a slight bruise of the hip. The fracture was attended to, and some simple lotion was applied to the injured hip, which was quite sore for a few days. Then for a week or two he thought no more of it. About this time he began to feel a sharp lancinating pain towards night in the hip joint which kept on from bad to worse until the pain was almost constant, and was not confined to the joint, but extended down the thigh to the knee, following the course of the great sciatic nerve. After this had continued for a month or six weeks, he began to feel an uneasy sensation in the groin of the same side, which soon amounted to the most excruciating pain, especially on lateral motion of the

thighs. An examination revealed a hard tumor about the size of a walnut, just where the external iliac passes under Poupart's ligament. The swelling was very painful to the touch or pressure of any kind, which caused him to keep the thigh slightly flexed on the abdomen. Things continued in about the same condition for some time, perhaps a month, he could not recollect. Then the tumor began to enlarge slowly, the pain left it, it was firm and elastic and could be handled with impunity. The pain in the hip and thigh became more severe and constant, extending down the leg to the very tips of his toes. The muscles of the posterior aspect of the thigh, more especially the hamstring muscles, were constantly twitching and jerking, also the muscles on the outer aspect of the leg, the skin was insensible to the touch from the hip to the ankle. The foot and ankle became œdematous, which gradually extended to the knee. He was not confined to his bed, but by carrying the limb in a sling, and with the aid of a crutch, could get around very well. All this time he was being treated by first one and then another of the physicians of the neighborhood for rheumatism. Getting no relief from the treatment there, he concluded to go to the Surgical Institute at Indianapolis. There he was examined and the case pronounced morbus coxalgia. They gave him some medicine, applied a splint to the limb, and sent him home, rejoicing with the assurance that he would be a sound man in two months. He had been at home about that time when I was sent for. I found him suffering as above stated, only in an aggravated form. The œdema had extended to the middle of the thigh. The leg was flexed at almost right angle with the thigh, and the thigh almost at the same angle with the abdomen. The tumor was fully as large as a fœtal head at full term, firm and perfectly free from pain. The external iliac artery could be felt pulsating its whole length along the inner border of the tumor near the median line of the abdomen. He had no appetite, bowels were constipated, and was becoming emaciated very rapidly, had not slept for nearly a week, so great was the pain. I administered, hypodermically,

morphia gr. one-quarter. In a very short time he was feeling much easier. I then examined the leg more carefully, it measured two and a quarter inches longer than the sound one. The buttock was flattened, and broad, and the muscles soft and flabby, and the gluteo-femoral crease was entirely effaced. Everything indicated hip-joint disease, and so I pronounced it and commenced treating it accordingly. To relieve the jerking and twitching of the muscles I applied a starch bandage extending from the toes to the crest of the ilium, using extension and counter extension until it became firm and hard. Opening the bowels, and keeping them soluble with a solution of sulphate of magnesia, using morphine to procure sleep and relieve pain. I then cut a flap in the bandage, just over the hip joint and applied the actual cautery, making an issue about the size of a silver half dollar, which commenced to discharge finely; as soon as the eschar dropped off, with very perceptible improvement in all the symptoms, sensibility began slowly to return, pain was lessened and more intermittent, twitching of the muscles was less constant and severe. He slept better, appetite improved, and he actually gained in weight; morphia was discontinued after the first week. The tumor to which I had been applying alternately tinct. iodine and a strong solution of muriate of ammonia, with a compress, was about stationary, or if there was any change, it had decreased in size. The œdema of the foot and leg, I judged from the feeling of the bandage, to be about the same.

About the first of July he was taken suddenly worse. The foot and leg were so badly swollen that the bandage was too tight to be borne, the muscular twitching increased. The tumor began to enlarge, and in a week's time had almost doubled in size. At that time it filled the whole of the left inguinal space extending into the hypogastric as far as the median line, from there upwards to within one inch of the umbilicus, then obliquely upwards and backwards till it was lost under the false rib; it could be easily traced, behind, from where it emerged from under the twelfth rib close along the

spine to the crest of the ilium. It still presented a firm and elastic feel over the whole extent of its surface, though at times I thought I could detect fluctuation. There was great pain and uneasiness in the region of the left kidney and along the course of the corresponding ureter, evidently from pressure with a frequent desire to void urine, at the same time an utter inability to do so, naturally from the same cause—viz., pressure on the neck of the bladder. The latter organ was crowded out of its usual position and lodged in the left inguinal space. Bowels were constipated and had to be relieved by enemas. By an examination per anum, I found the tumor encroaching on the rectum to such an extent as to preclude the possibility of an operation of any kind, except fluid. Dr. F. M. Johnson, of Platte City, Mo., happening to be in town at that time, I had him examine the patient with me. We both came to the same conclusion, that the swelling contained fluid, although it was too deep to be reached with the hypodermic syringe, which I used as an exploring needle. I immediately sent to Louisville for an aspirateur, with which to draw off the contents, fearing the results of so formidable an operation as using the knife. The urine had to be drawn off with the catheter, which soon became a very painful and difficult operation, from the increased pressure on the neck of the bladder. I tried leaving a flexible catheter in permanently, but he could not bear it. Nothing seemed to give the least relief except the inhalation of chloroform, which was only temporary. On the 31st of July I received the aspirateur and proceeded to use it. I introduced the trocar about two inches above Poupart's ligament, midway between the symphysis pubis and the anterior superior spine of the ilium. The structure was very dense, when about two and a half inches in depth had been reached, the fluid began to flow into the bottle rather sluggishly, as it was very thick and tenacious; it resembled very much the white of an egg mixed with a little pus and considerable blood. At that time I drew off fourteen ounces with but very little effect on the size of the tumor. But it seemed to relieve him very much and gave

him no more pain than—to use his own expression—a "flea bite." Before introducing the trocar, I used a spray of rhigoline and a small incision through the skin, using the largest of the three needles. He had a free operation that evening, and voided urine with but little difficulty, and slept very well all night. Not feeling satisfied with the result, I again, on the 3d of August, used the aspirateur. This time introducing the needle a little to the right of the first opening, and having completely exhausted the receiver, did not open the stop-cock until the needle had sunk its full length into the tumor, when it began to flow in quite freely until a pint had been drawn off, then by pressure and counter pressure I succeeded in getting six ounces more. On withdrawing the needle, the tumor had almost entirely disappeared, the bladder returned to its natural position, and he was able to extend the thigh almost naturally, though the leg was still flexed. The pains all left him and he was able to get up and go about with the aid of his cane and crutch. He was taking cod-liver oil and a prescription of iron, quinine and strychina with nutritious diet, and improved daily.

On the 15th, the tumor having enlarged somewhat, I used the aspirateur again. This time drawing off twelve ounces, and again on the 20th. By this time the œdema had entirely disappeared, though the twitching of the muscles still continued with considerable severity. That being the only source of pain he was then suffering, he was very anxious to have it relieved. The leg had now assumed a morbid sensibility, and would not bear the pressure of a bandage; so I determined on tenotomy at the knee-joint. I divided all the resisting tendons, (all of the hamstring muscles) and extended the leg very nearly straight, and kept it so for ten days. After that he had but very little trouble in getting about; had a stirrup put on his crutch about two inches from the ground, and with the aid of this he could walk very well, bearing his whole weight on that limb.

I used the aspirateur again on the 27th, drawing off twelve ounces, making in all nearly three quarts. I did not see him

again, only casually, for nearly a month. In the meantime he had been out of town; had taken a trip on the cars of a hundred miles or more. On his return I was sent for, and found him suffering very much; the tumor of its original size, hard and solid; œdema had returned in the foot and leg, the bladder was distended and lying in the right iliac fossa; the bowels were tightly locked; had no passage for three days, and was only able to pass a few drops of urine at a time, and then with the most excruciating pain. I relieved that with the catheter, and his bowels but only partially with an enema. An examination convinced me that the case was hopeless. Drs. Johnson, of Platte City, Mo., Russell and Wakefield visited him with me, and came to the same conclusion. Repeated trials with the aspirateur failed to get any fluid.

On the 28th of September I found it impossible to introduce a catheter into the bladder, and as immediate relief was necessary, I used the aspirateur, using the smallest of the three needles, introducing it at about the centre of the swelling. The organ was emptied in a very short time; it contained just about fourteen ounces of urine, when I withdrew the needle and simply applied a small piece of adhesive plaster to the puncture. The same dressing was used in all of the other wounds made by the instrument. As it was only a question of time, and that very short, as to the termination of the case, my only object was to make the patient as comfortable and cause him as little pain as possible. I therefore discontinued all medicines, simply prescribing an enema to relieve the bowels as much as possible, and drew off the urine when necessary, as above. He had been using chloroform for several days to relive the spasms of the neck of the bladder, which was always very severe whenever that organ was distended with urine. He died from an overdose of chloroform taken by himself during the night.

There had been considerable diversity of opinion as to the nature of the case. From the first Drs. Wakefield and Russell contending that it was simply a fibrous tumor, and that the

hip joint was not implicated, but that the trouble there was rheumatic; whilst Dr. Johnson and myself thought it was morbus coxalgia, induced by the fall from the buggy, and that the bottom of the acetabulum had been fractured; falling as he did on the great trochanter, the whole force of the fall would be expended at that place, and that the tumor was an abscess caused from the fracture and resulting inflammation. It certainly presented all the symptoms of hip-joint disease.

The post-mortem examination revealed a tumor occupying the position above described, with a firm, dense membrane covering it. The iliacus and psoas muscles were mere fibrous bands, and the abdominal muscles were much attenuated and very pale. On attempting to remove the tumor, it was found to be firmly attached to the whole of the left side of the pelvis and the three lower lumbar vertebræ. A portion of the ilium was removed with it, the rest of the attachment being broken up with the knife and chisel. It weighed fifteen pounds, and was composed of a whitish granular mass, resembling very much boiled tapioca. There was not the slightest trace of pus or the fluid which I had drawn off; scattered through it were numerous small, round hard bodies about the size of a filbert, resembling very much a lump of coral. The color faded from the surface to the centre, where it was almost white. The ureter and pelvis of the kidney (left side) were considerably dilated and inflamed. There was not the slightest trace of inflammation in the bladder, except at the neck, which was caused by pressure of the tumor, although I had penetrated it *six times* in drawing off the urine with the aspirateur.

The acetabulum was entirely destroyed. On dividing the muscles and ligaments about the joint, the *head of the femur could be easily pushed through it into the cavity of the pelvis;* the femur itself was a *mere shell to within about five inches of the knee joint,* being filled with the same substance of which the tumor was composed; about two-thirds of the head of the bone was gone, and looked very much as though it had been cut out with a sharp knife; the periosteum appearing perfectly natural

and healing up to the very edge of the cavity. The growth was evidently malignant, and doubtless a cancerous diathesis existed in the blood, being latent, was waiting, as one may say, for the necessary local condition to develop itself. There was throughout the whole course of the disease an absence of those symptoms, and the cadaverous appearance so denotive of the cancerous cachexia. The growth itself was, except at the very first, entirely free from pain, and was susceptible of the severest manipulation. The attendant pain was caused by pressure on the contiguous nerves and organs. From whence came the fluid that was withdrawn with the aspirateur, amounting to nearly a gallon, of which the tumor was at one time almost wholly composed, for it entirely disappeared after the second operation with the aspirateur?

Art. IV.—The Clinical and Histological Character of Syphilides. By Dr. Moritz Kohn. [Translated from the Jahrbücher, of Leipzig.] By Edw. von Donhoff, A. M., M. D., Louisville, Ky.

Syphilides, which are regarded as the external manifestations of a syphilitic diathesis, appear in a great variety of shapes, by which means they assume a striking similarity to syphilitic skin diseases, which is dependent upon the external efflorescence alone—its color and arrangement. According to a universal but erroneous custom, we classify the various syphilitic eruptions with an eye to their shape alone, and differentiate as follows: Roseola, acne, psoriasis syphilitica, eczema ecthyma syphiliticum, herpes, lichen syphiliticus, etc., etc. As a result of a division based upon such a plan, a question arises as to what constitutes the specific characteristic of an eruption which mark it syphilitic in nature? Most frequently we find peculiarities, as to appearance, indicated in the works which, on account of their ever-changing nature (being influenced by ex-

ternal causes), we rarely or never see, and which have consequently very little or no specific significance to us; but still it is clear to every observer that the peculiar "toute ensemble" of the victims of syphilis makes an impression which we can not escape; the specific impress is unmistakable.

If we look, setting aside the old symptomatology for the cause of this, we will find that the peculiarity of syphilides constitutes an expression of a number of characteristics which, so to say, tells the history of the separate efflorescences, and steadily marks them as a product of a specific cause.

If we now examine, in the full spirit of the word, the foundation proper for all this, we inevitably find that syphilis constantly produces but a single kind of pathognomonic indication on the skin, and this is modified only as the disease itself progresses through its various stages.

(1) The eruption appears, under all circumstances, as a sharply-marked, thick, and irregular infiltration of the corium and papillary layers, and can only be distinguished (the individual pustules) by their size. A subcutaneous pustule, as large as a pin-head, is identical in its integral construction and its external part with a nodule ranging between the size of a bean to that of a hazel-nut. The infiltration proves to be, under the microscope, an almost homogeneous, dense mass of cells clustered about the vessels and passides of the corium and papillaries.

(2) These cells are not intended as elements of a permanent organization; but, on the contrary, their course is constantly marked by retrocession and disappearance; either as the result of fatty degeneration and resorption, or by organic destruction.

(3) A third and very apparent peculiarity of syphilitic skin infiltration is the constant sameness of direction and succession in which the infiltration first enlarges and then disappears; both processes originating in the centre and approaching the papillary. The peripheral parts of the syphilitic products are relatively the youngest, and evince in proof of this all the character-

istics of fresh infiltrations, and live the longest; the oldest parts, on the other hand, are the central nuclei, and, in the natural order of things, first meet retrograde metamorphosis and death.

These three conditions described invariably constitute all of the characteristics of skin diseases modified by syphilis, and from these appearances is derived the entire list of syphilides. We may follow consecutively the changes in their typical character to their end; and, conversely, we may start from any point in their perhaps already far developed history, and determine accurately their origin and nature. As a prototype of syphilides, with regard to the characteristic mentioned, we would point out the nodules in which may be found the wished-for and withal never-to-be-forgotten appearances; and in which also the entire list of syphilitic exanthematous eruptions may show themselves in succession.

Constituted of the corium and papillary, the nodule affords the most favorable bed for the sharply-marked, thick cell infiltration of the syphilitic eruption. The appearances which we see from the beginning to the end in all of the syphilitic products, are manifestations which belong de facto to the nodule. On making a vertical section through the epidermis, rete malpighii, papillary layer, and corium, we find that the nodule forming cell infiltration is collected in the corium and papillary layers. These being by this means pushed upwards, and the skin assuming in consequence a generally elevated appearance, imparts the tense look to the overlying epidermis. In this consists the specific conformation of the eruption, and if an efflorescence is not marked by these appearances, we positively conclude it to be non-syphilitic. After a longer or shorter period, retrocession and destruction of cells follow, eccentrically, the advent of the nodule; its centre sinks, the epidermis corrugates, and in time desquamates; the periphery in the meantime preserving its primary appearance, until, in due course, it too disappears. (The appearance of peripheral infiltration about a central desquamation of epidermis, or about a central atrophied eschar of the skin, is of decided importance in differentiating

between the stages of advancement of the disease. Instead of this central eschar, there may also appear, as the result of suppurative destruction, a dirty, yellowish-brown scale; this, however, does not modify the diagnosis.)

Exactly in the same manner do syphilides, in the advanced stages of the disease, appear and finish their course—herpes syph., rupia syph., the ulcers of the scaly eruptions, as also the complicated forms of psoriasis palmaris, etc.

Psoriasis syph. consists of a number of papillæ closely set in rows; herpes and pemphigus, of an accumulation of a large quantity of fluid underlying the epidermis, the ulceration in both consisting of eccentric destruction of the infiltration. If a crust is formed on the cluster of ulcers, followed by disintegration of the mass surrounding the central ulcer, by which means the central crust, first through the instrumentality of the fluid resulting from the disintegration, then through the underlying and larger crusts, is lifted upward, whilst on the circumference of the sore a new infiltration is formed, in which a second ulcer is dug out (a process which may repeat itself often), we have before us a picture of a rupia syph.—a conically-shaped scab, consisting of layers, the base of the cone covering the ulcer and nicely fitting the elevated and infiltrated edge. If a syphilitic ulcer has attained an extraordinary size, then the specific infiltration no longer marks its periphery regularly in its whole circumference, but only in part; this renders it possible that that portion which is not subjected to a *new* infiltration, may attempt to heal by granulation, which process, if it extends in the direction of a locality where such infiltration *has* been formed, is futile; ending, as it does, in destruction—thus is formed the *kidney sore.* If many of these ulcers arrange themselves in rows, central eschars result, around which continuous rows of *new* ulcers fix themselves, the abrupt edges of these representing the periphery of the ulcerated surface, and the destructive process encroaching on them, forms the serpiginous sore.

In short, every syphilide consists of a sharply-defined cell-in-

filtration of the corium and papillary layer; it represents, therefore, a nodule of a greater or less circumference. Every external variation of syphilides is the result of the unvarying, law-abiding course of specific cell-infiltration, resulting and from which the forming elements undergo either resorption or pyogenic degeneration; and that, too, in a direction tending from the centre, or earliest point of development, to the periphery.

Despite this law, there are syphilitic exanthemas in which it is difficult to discover the characteristic appearance named. In these the syphilitic nature is often determined upon by exclusion. This fact is particularly applicable to syphilitic infiltrations which are confined to a small space, and where the individual nodulas are not well developed; as, for example, in lichen, acne, varicella, and roseola. However, the true characteristics are present, despite the fact that they are not as palpable as ordinarily.

The syphilitic vegetations which, in the progress of the disease, occur on the skin, and which seems to be contradictions of the foregoing, may either result from syphilitic cell-infiltration of the papillæ which have become enlarged; lengthening so that the line of infiltration appears as if covered with warts; (but even in this case the papillæ are subject to the same processes which were described as pertaining to the corium), or in the course of the inflammatory processes which mark the skin syphilides, a rapid formation of fibrous bands and vessels in the shape of warts occurs; but such new formations do not originate in syphilitic infiltrations (where loss of substance occurs in consequence of syphilitic ulcers, this loss being repaired by new tissue of which the eschar consists) but from the normal structure around it.

Now as syphilides are all dependent upon the same pathologico-anatomical changes, so are they all, of whatever form, identical in nature as to their course, and may by this means be distinguished from other non-syphilitic skin diseases, excepting those few cases in which the specific appearance is less marked, and for which we may only claim to have obtained

a certain and easy mode of diagnosis, when histology shall have attained such a state of perfection as to be enabled to offer us unmistakable indications, by means of which we may correctly interpret the law which governs the accumulation of cells in the infiltrations of syphilides.

ECLECTIC DEPARTMENT.

"Carpere et colligere."

ART. I.—SYPHILIS IN ITS RELATION TO THE NATIONAL HEALTH—BEING THE ADDRESS IN SURGERY, DELIVERED BEFORE THE AMERICAN MEDICAL ASSOCIATION, AT ITS MEETING AT DETROIT. By S. D. GROSS, M. D., LL. D., D. C. L. OXON, Philadelphia, Pa.

I here present thee with a hive of bees, laden some with wax and some with honey. Fear not to approach. There are no wasps, there are no hornets here. If some wanton bee should chance to buzz about thine ears, stand thy ground and hold thy hands; there's none will sting if thou strike not first. If any do, she has honey in her bag will cure thee too. QUARLES.

Mr. President and Gentlemen,—The subject which I have chosen for the Address of Surgery, although not a novel one, is, nevertheless, invested with such momentous importance that it can not fail, if rightly understood and wisely interpreted, to enlist your sympathy and arouse your warmest feelings. I allude to syphilis, considered in its relation to the national health; or, in other and plainer terms, to its deteriorating influence upon the human race. If I say that I approach this subject, in many of its aspects so unpleasant to my taste, with great fear and misgivings, with doubt as to its fitness to be discussed upon such an occasion, no one, I am sure, will question my sincerity. It is easy to foresee that some at least of the sentiments to which I shall be compelled to give utterance will be repudiated as unorthodox, if not denounced as positively prejudicial in their bearings and tendencies. I feel, however,

that I have a great duty to perform, and it is difficult to conceive of a more favorable opportunity for presenting my views than the present, standing as I do in the midst of my brethern, congregated from all sections of the United States, and representing, in no inconsiderable degree, the character and interests of the Medical Profession. If, in the discussion of this subject, in some of its more important relations and manifestations, I should be so unfortunate as to give offence to some of my associates in this house, or in any wise disturb the prejudices of the public, I can only say, let it be so. Far be it from me, on the one hand, to court notoriety, or, on the other, to fear the reproaches and denunciations of my fellow-citizens. My sole object is to develop and defend facts, to separate truth from error, and, if possible, to induce those who shall hear me to consider fully, patiently, and deliberately the magnitude and importance, nay, the appalling character of the subject. I shall not be sorry if, in what I may say, I shall meet with opposition. When Charles James Fox was Prime Minister of England, he one morning rushed into the House of Parliament, exclaiming "I am ruined! I am ruined!" and when some one asked the reason he answered, "because the government has no opposition." It is a trite remark that opposition is the soul of business, and I should, indeed, be sorry if this address should fall still-born from my lips. The subject is one which invites, and, I hope, will provoke discussion. It is high time that it should be thoroughly ventilated, and brought boldly and prominently, not only before the Medical Profession, but the American people, who are so deeply interested in it. It is high time that they should be enlightened upon what is daily transpiring in their midst, and imperceptibly sapping the very foundation of society. When a pestilence, as, for example, that of cholera or small-pox, breaks out in a community, and threatens to decimate its population, every man's fears are at once aroused, and steps taken to counteract its progress; every citizen is upon the alert, and every newspaper is urgent in its appeals for help; but there is a disease a thousand times worse than the most

deadly epidemic, doing its work slowly, and, as it were, in disguise and darkness, ruining entire families, destroying many of our best men and women, and laying the foundation of untold misery, wretchedness, and woe, not unfrequently extending through several generations, and literally poisoning the very foundation of life.

In discussing this subject, I shall speak, in the first place, of the history and origin of syphilis; secondly, of its mode of propagation; thirdly, of its prevalence; fourthly, of the indestructible character of its virus; fifthly, of its alliance with scrofula and lepra; and, lastly, of its treatment, curative and preventive, the latter embracing the consideration of prostitution and of its effects upon the national health.

1st. It has long been my conviction, both from study and reflection, that syphilis has existed, as a distinct, independent, and specific disease, from the earliest periods of society. There can be little doubt that it is as old as the promiscuous intercourse of the sexes. If we have no definite or authentic account of its origin and early prevalence, it is simply because there were, at that early age of the world, no men competent to observe and to record what they saw, or what was passing under their eyes. The ancient physicians confounded all kinds of diseases of the genital organs with each other, often mistaking the specific for the common, and conversely; and hence arose the idea that syphilis, as regarded at the present day, was, until a comparatively recent period, purely a local affection. The bibliographical researches of various writers, as Sanchez, Hensler, Rosenbaum, and, more especially, of Cazenave, have fully established the antiquity of syphilis. Proofs of an indisputable character exist, that in China and India the disease was well known upwards of twenty-five hundred years before the Christian era. That syphilis prevailed among the ancient Israelites is sufficiently apparent from the accounts of the lepra in Leviticus, a complaint which, from the graphic delineation given by Moses of its contagious nature, so closely corresponds in its main features with syphilis that they must be

regarded as being one and the same malady. No impartial and enlightened physician can read the accounts of the sufferings of Job and of David, those two great and wonderful men, without being convinced that they were brought on by what are usually called "early indiscretions." The symptoms they so graphically describe clearly point to what is known as the tertiary form of the disease. Job, in chapter vii. of the Book bearing his name, says: "My flesh is covered with putrid sores," and, in chapter xxx., he adds: "My bones are pierced with pains in the night season, and my sinews take no rest." The royal Psalmist says: "There is no soundness in my flesh because of thine anger; there is no rest for my bones on account of my transgressions. My sores stink and are corrupt, because of my folly. For my loins are filled with a loathsome disease, so that there is no soundness in my flesh." Psalm xxxviii. Gonorrhœa prevailed in the time of Moses, and men affected with it were pronounced as unclean, and, consequently, as unfit to cohabit with their wives. Is it probable that the inhabitants of Sodom and Gomorrah, both of which were destroyed on account of their wickedness, their crimes against nature, and other grave offences, were free from syphilis? Sexual commerce between the two sexes must have been of constant occurrence, and been followed, as it is in our own day, by the saddest results. The earlier races of mankind were endowed with the same feelings and passions as the people of modern times, and that promiscuous sexual intercourse was common among them, is proved by the fact, that concubinage was one of the peculiar prerogatives of the higher and more wealthy classes.

The errors into which the earlier writers fell arose, it seems to me, from the circumstance that they confounded what are now accepted as symptoms of constitutional syphilis with the effects of lepra, elephantiasis, mentagra, lichen, and other cutaneous affections now recognized as distinct and separate complaints, or as modifications of the action of the syphilitic virus, brought about by the influence of climate, occupation, modes of life, and other causes. Passing by the writings of the "Father of Medicine," who, in speaking of a disease peculiar to the

Scythian women, mentions the occurrence of ulcers upon their genital organs, it is a well-known fact that Galen was acquainted with osteocopic pains, so graphically described by Job and by modern syphilographers, and also that he recommended circumcision in a case of obstinate chancre of the penis. Aretius speaks of the destruction of the uvula, tonsils, and fauces, as far as the root of the tongue; Plutarch, of erosions of the tibia; and Marcellus Empiricus, of serpiginous ulcers of the leg. Josephus, in his last account of the illness of Herod, attributes the death of that monarch to the putrefaction of his genital organs. Oribasius, Ætius, and Paul of Ægineta afford evidence of the clearest character, in their writings, that they had just notions of the nature and effects of syphilis.

If we seek for information respecting the existence of this malady among the early Romans, it will not be difficult to find it. The Latin physicians, imperfectly educated as they were, knew and distinguished several forms of sores upon the genital organs, corresponding with the hard, soft, and other varieties of chancre of the present day. Celsus, so celebrated for the purity and elegance of his diction, describes buboes and ulcers of the groins as products of diseases of these organs. Martial, in his epigrams, refers to the existence of sores in the mouth and throat of debauchees, and he has a verse admirably descriptive of a family all the members of which, the parents as well as the children, were affected with condylomatous excrescences. Horace, in one of his odes, makes distinct mention of the disease; and Pliny states that a woman was drowned as a punishment in the lake of Como, because she gave her husband a disease in his genital organs, from the effects of which he died. All these, of course, are isolated cases, but they are, nevertheless, of great value as showing the existence of syphilis among the earlier Romans. How depraved the ancient Roman women were, in the latter periods of the republic, is evinced by the fact that they openly wore breastpins and other ornaments representing the male genital organs. To suppose that such a people were free from venereal maladies is an egregious absurdity, unworthy of serious refutation.

The assertion that syphilis originated in the New World, and that it was thence carried to the Old by the sailors who accompanied Columbus in his voyage of discovery, is without the slightest foundation in truth. Indeed, so far from this having been the case, there is every reason to believe that these men imparted the contagion to the natives, and thus planted the seeds of the disease upon this continent. The notion of the American origin of syphilis may be regarded, as has been happily remarked by Cazenave, a falsehood invented by a Spanish writer, Oviodo, who published a pamphlet upon the subject in 1518, nearly twenty years after the outbreak of the epidemic in Italy, in order to palliate, if not justify, the outrages committed by his countrymen in America; atrocities so heinous as to excite the indignation of all Europe.*

The history of syphilis, nosographically considered, remained very imperfect until the close of the fifteenth century. The earlier writers had only, or chiefly, studied it in its primitive relations, as it affected the genital organs and the groins. The constitutional effects of the disease, especially the various forms of eruptions to which it gives rise, were either unknown to them as separate and distinct entities, or, as seems more probable, they were misinterpreted, or ascribed to other causes. That this should have been the case is not at all surprising, when we reflect upon the fact that hardly anything was known of visceral syphilis, now ascertained to be of such frequent occurrence, until the last fifteen or twenty years. Knowledge is originally bounded by narrow limits; it is only by degrees that it expands, and assumes definite proportions, shedding its luminous rays upon the objects of its investigation. J. Fernel, whose work, entitled "De Lues Venereæ Curatione," appeared at Venice in 1546, at least half a century after the epidemic of syphilis in Europe, was the first to give an account of secondary syphilis, as Ricord was the first to describe what is now known as its tertiary form. The frightful ravages committed by syphilis in the French and Spanish armies during the siege

* British and Foreign Medical Review, vol. xxiii., p. 347, 1847.

of Naples, and soon afterwards in Europe generally, towards the close of the fifteenth century, afforded the physicians of that period ample opportunities of studying the disease both in its local and constitutional aspects, and the result was the publication of a number of treatises full of interest in an historical point of view.

How syphilis took its rise, whether in the human subject or in the inferior animals, is a question which has often been asked, but not satisfactorily answered. Ricord, I believe, was one of the first to suggest the idea that it sprung, like cow-pox, rabies, or malignant pustule, from some of the domestic animals; and in a work remarkable for its learning, entitled "Recherches de Pathologie Comparée," issued in 1845, the author, Dr. C. F. Hensinger, of Cassel, makes a statement, now universally accepted by veterinary surgeons, that all these creatures are subject to contagious discharges, vegetations, and ulcerations of the genital organs, which are transmissible by coïtion and inoculation, giving rise to a class of affections closely resembling those induced by the syphilitic poison in the human subject. From his knowledge of these diseases, he is led to conclude that they are very much in the same position as the syphilitic affections of our race were prior to the close of the fifteenth century. He disclaims the idea, advanced by certain authorities, that syphilis was originally propagated from man to the brute.* That these assertions are well founded is rendered highly probable when it is recollected that our domestic animals are subject to many, if not all, the diseases incident to the human species. Blennorrhagia is met with in the urethra of horses and dogs, and leucorrhœa is a frequent affection of cows, mares, and sluts.

A contagious venereal affection, closely resembling syphilis, is liable to occur among the equine races, and has been described under various names by the French and German veterinary surgeons, as chrancrous epizoötic, venereal typhus, and syphilis of the horse. It is said to prevail with the greatest severity in

* "British and Foreign Medical Review," vol. xxiv., p. 89, 1847.

Southern Russia, Silesia, Switzerland, Wurtemburg, and France. It has also been noticed in Algiers since the occupation of that country by the French. The disease, which is originally local, presenting itself in sores upon the genital organs, is followed by cutaneous eruptions, paralysis, and various nervous affections, often terminating in death. Its contagious character is well established.*

Those of my audience who desire to study this subject, will find much interesting information in a work recently published by Dr. T. W. Müller, entitled "Die Venerischen Krankheiten im Alterthum."

2d. The *modes of infection* in syphilis are too well known to require anything more than a passing notice. Impure connection is, of course, the most common source of the disease; but the contagion may also be communicated in the act of kissing and smoking, by the contact of various utensils, as spoons, knives, and drinking cups, and, in the child, in the act of sucking through the nipple of an infected mother or nurse. Accoucheurs occasionally contract the disease from the inoculation of their fingers during their attendance upon infected women. I have at present under treatment two medical gentlemen suffering from this cause, and what is, if possible, still more lamentable, their wives are equally tainted, both laboring under constitutional symptoms. During the last fifteen years numerous cases have been reported in which the infection was communicated through vaccination. The outbreak of syphilis by vaccination, which occurred in 1861 at Rivalto, a mountain village in Piedmont, was so peculiar as to attract general attention. For some time the cause remained a mystery, but after some investigation it was finally ascertained that the disease had arisen from the lymph that had been inserted into the arm of an apparently healthy child, but which, upon a careful examination, was found to have been affected with inherited syphilis. Of sixty-three children thus vaccinated, forty-six were almost simultaneously infected. In addition to the chil-

* "London Lancet," p. 251, Aug. 16, 1873.

dren, twenty women suckling them contracted the malady. Of 351 persons vaccinated from children laboring under syphilis, whose history has been collected by Viennois, 258 were inoculated, the remainder escaping. In 1866 an outbreak of syphilis occurred at Morbihan, a village in France, caused by infected lymph employed in vaccination. Depaul, who was commissioned by the Academy of Medicine of Paris to examine into the nature of the endemic, reported that of 42 children whom he had an opportunity of inspecting, 39 had suffered from syphilis. During our late war numerous cases of vaccinio-syphilis occurred among our soldiers, especially among those of the Confederate army, which have been carefully collated by Professor Jones, of New Orleans, and made the basis of an exhaustive memoir upon the subject, constituting a highly valuable contribution to our literature.

Biett long ago remarked that there are certain forms of syphilis with which every species of contact may prove dangerous. Every one now admits, what was for a long time doubted, that the secretions of a syphilitic uterus are capable of inoculating the male organ during sexual intercourse. This statement is true not only of purulent and muco-purulent matter, thrown off by the surfaces of this organ, independently of the existence of syphilitic sores, but also of the menstrual flux, especially when, as not unfrequently happens, it is more than ordinarily bloody, and also of pure blood, emanating from the uterus. Simple vaginal secretions occasionally possess similar properties. The proof of these statements is found in the fact that many of the public prostitutes of Paris and other cities, who are constantly undergoing inspection, often communicate the disease when the most careful and patient investigation fails to detect any, even the most minute sores, abrasions, or mucus patches in the genital organs. The records of private practice afford similar proof. Many writers now speak of a true syphilitic gonorrhœa, attended with a discharge of a contagious character, followed, when inoculated, by constitutional infection. Dr. William A. Hammond, of New York, was one of the first

writers to call attention to this subject, and to insist upon its reality. It must not, however, be forgotten that it is notoriously difficult to detect contagious sores in the female genital organs, either because they are often extremely small, or because they are situated within the uterus, and thus elude observation, however carefully made. Inguinal adenitis is very uncommon in chancre of the uterus, and the enlargement which takes place in the pelvic lymphatic glands in attacks of this kind, is generally impossible of detection.

All syphilographers are now agreed respecting the infectious character of the blood of syphilitic persons. That this is so was long ago inferred from the fact that the semen of an infected person, a direct secretion from the fluid, is capable of imparting the poison, not only to the embryo, but often also to the mother. Of late years, however, this matter has been tested by an appeal to experiment, so satisfactory in its results as to leave not a shadow of a doubt upon the subject. Professor Pellizari, of Florence, in 1860, inoculated his friend, Dr. Bargioni, with blood taken from a vein in a syphilitic woman, and the operation was followed, within sixty-five days, successively, by the development upon the skin, of a papule, an ulcer with an indurated base, and a specific areola. The specific poison of syphilitic vaccine matter has been shown by Viennois and others to reside exclusively in the blood. When care is taken to keep the lancet perfectly free from this fluid in performing the operation, or when the operation is done with lymph or a scab destitute of blood, no risk of infection whatever is incurred.

Of the propagation of syphilis by kissing I have seen a number of instances. The last that I had occasion to witness was one of hard chancre upon the lip of a young lady. It was followed in a few weeks by a hard granular swelling at the base of the jaw, and subsequently by well-marked roseolar and papular eruptions of the skin, extending over a large portion of the body, rheumatic pains in the joints, and ulcers of the mouth and throat. About eighteen months after this occurrence, for

which she was treated by my friend, Dr. Maury, this lady married, and was in due time delivered of a syphilitic child, which perished within less than eight weeks after its birth in a state of profound emaciation, with an icterode condition of the skin and ulcers upon the vulva and at the anus.

The transplantation of teeth from the mouth of one person to that of another, extensively practiced in the latter part of the last century, was abandoned because it was occasionally the means of communicating syphilis. How far skin-grafting may always be a safe operation remains to be determined. Doubtless syphilis might readily be conveyed in this way, as, for instance, when the graft is transferred from the amputated limb of one person to the body of another. When the system is thoroughly saturated with syphilitic virus, it is easy to conceive that contact with any of the secretions, the blood, and the different tissues might spread the infection. Among the poorer classes of people whole families sometimes suffer from this disease from using the same utensils, sleeping in the same bed, wearing the same clothes, and wiping with the same towel.

3d. Of the *prevalence* of syphilis in different parts of the globe, no correct estimate can be formed from any data at present before the Profession. All that is known, with any degree of certainty, is that it exists everywhere, both among civilized and barbarous nations, where promiscuous sexual commerce is practiced. The inhabitants, however, of the tropical regions of the world seem to be more liable to it, and to suffer from it in a greater degree, than the people of the colder and more northern regions. It is particularly common in China, the East Indies, Southern and Western Africa, Mexico and South America. In some of these countries, as well as in others, it occasionally assumes an epidemic form, affecting, either rapidly or more or less gradually, large portions of the inhabitants from the most humble to the most exalted. The first epidemic of

of which we have any authentic information occurred near the close of the fifteenth century, in France, from which

ead successively and rapidly over Germany and Italy, in

the latter of which it reached its climax during the siege of Naples by the French under Charles VIII., in 1494. Dalmatia, Macedonia, and Greece did not escape the scourge. England, Ireland, and Scotland were also visited, but not to the same fearful extent as the continent of Europe. The epidemic lasted for many years, causing great alarm and immense suffering, with a considerable amount of mortality, both directly and indirectly. The distemper, contracted for the most part in the act of coition, was characterized, at first, by ulcers upon the genital organs and by glandular swellings in the groins, and, subsequently, by various kinds of eruptions, pustules, and sores of the skin, ulcers of the throat, gummy tumors, nocturnal pains, and nodes, caries, and enlargements of the bones. Phagedenic and gangrenous ulcers were of common occurrence, often eventuating in loss of the lips, the nose, and the genital organs. From all accounts it retained its pestilential character for about seven years. Many children contracted the disease by sucking their infected mothers or nurses.

As an epidemic, syphilis has appeared in various parts of the world. In corroboration of this assertion, it may be stated that, only a comparatively short time ago, the disease was so common in East Prussia, Lithuania, and the adjoining provinces of Poland and Russia, among all classes of people of both sexes, young and old, that its prevalence could only be accounted for upon the supposition that it was an endemic affection, capable of being communicated by other methods than by sexual intercourse. While, according to Dr. Schnuhr, the historian of the endemic, chancres and buboes were comparatively rare, condylomatous excrescences, rhagades, cutaneous eruptions, and ulcerated sore throat were exceedingly frequent, especially the first, which were often found in great numbers on different regions of the body. Among the poorer classes, whole families sometimes suffered in this manner, from the oldest to the youngest, owing, as was supposed, to the fact that all the inmates of the infected houses not infrequently occupied the

same bed, and were brought in contact with one another in various ways.

It was only last year (1873) that an endemic of syphilis occurred at Brives, a little town in France, fifteen women, nine men, and ten children having become affected in rapid succession. Great excitement for a time prevailed, wife accusing husband, and husband wife of conjugal infidelity, when it was at length ascertained that the cause of all the trouble was a midwife, who had a chancre upon one of her fingers, contracted in the exercise of her profession, and who had thus carried the poison from house to house.

It would be a matter of deep interest, and, in a practical point of view, of the greatest possible value, if we could ascertain, even approximately, the extent of syphilis in our cities and larger towns; but for such a decision there are, unfortunately, no data. It may, however, be assumed that it is of gigantic proportions; that it exists in many of the best and noblest families of the land; that since the establishment of railway travel, it has penetrated every rural district; and that it is poisoning and slowly but surely undermining the very fountains of life in every direction, sowing the seeds of death among our people, and gradually deteriorating the national health. It is no slander to assert that many of the cases of the disease brought under the notice of the practitioner, occur in the higher walks of life, among married as well as among single men. Out of a population of forty millions, the present number of inhabitants in this country, it is safe to assert that nearly two millions are at this moment infected with syphilitic virus. This estimate tallies very closely with that of Mr. Holland of the number of syphilitic subjects in the United Kingdom of Great Britain; and what is true of that country may fairly be assumed to be true of our own.

Syphilis is always a common affection among soldiers and sailors. During our late war, within a period of about two years, that is, from 1861 to 1863, nearly 23,000 cases of the disease occurred among our troops. In the French army, in

1862, there were, in that single year, 11,000 cases out of an active force of 300,000 men; and in the British service during the same period, the proportion of cases was still greater. Soldiers stationed at barracks generally enjoy unusual facilities for contracting syphilis; and it is well known that the first thing a sailor usually does, upon reaching shore, is to take a glass of grog, and the second to visit a house of ill-fame.

Of the extent of venereal diseases in the larger cities of the United States, no statistics have ever been furnished, and it would, therefore, be useless to indulge in any speculations respecting it. Of its extraordinary prevalence in London, some idea may be formed, from the number of cases met with at its principal hospitals, dispensaries and other charitable institutions. Thus, of the 6,000 out-door surgical patients annually treated at St. Bartholomew's Hospital, nearly one half are said to labor under some form or other of these affections. At Guy's Hospital 25,000 cases of a similar character are annually prescribed for; while at the Royal Free Hospital they amount to the frightful number of 42,705, or 117 cases on an average a day. At King's College, University College, St. Mary's, Westminster, Middlesex, and St. George's Hospitals, the number of cases varies from 20 to 33 per cent. of all the surgical out-patients daily seen at these institutions. At the Seamen's Hospital, Dreadnaught, the number of cases daily treated is about fifty, consisting chiefly of sailors of the merchant service. At the Lock Hospital upwards of 200 out-patients, the subjects of venereal diseases, are daily observed; and at St. Thomas' Hospital one-half of the out-patients are similarly affected.

Of 100 eye patients, who, on an average, apply every week for relief at St. George's Hospital, 30 per cent., according to Mr. Tatum, are syphilitic; and at the Ophthalmic Hospital, Moorfields, the largest eye infirmary in London, if not in the world, Mr. J. Hutchinson estimates the number of syphilitic cases at 20 per cent. At the hospital for throat diseases the number of syphilitic cases is about 15 per cent.; and in the

various metropolitan charities for skin diseases one-eighth to four-fifths.*

After these appalling figures, can we wonder at the enormous rate of infantile mortality which pervades London and other large cities both of the Old and the New World? Like apples which rot upon the tree before they are ripe, the children of these infected persons drop dead from their mothers womb, or, if they are born alive, they are sure to perish soon after birth.

All attempts made to ascertain the number of prostitutes in the principal cities and countries of the world have signally failed. Indeed, the results of such inquiries could only, at best, be approximately correct. In New York the late Dr. Sanger, writing in 1858, places the number at 6,000. Since that period the population has much increased, with, of course, a corresponding augmentation of the "social evil." Dr. M. H. Henry, the able editor of the "American Journal of Syphilography and Dermatology," informs me that clandestine prostitution prevails to an enormous extent in New York, and it is reasonable to suppose that this is also true of the other large cities of the United States. Like causes, operating in large cities, produce like results. In Paris the number of courtesans is set down by a recent writer, Mons. Anner,† of Brest, at 60,000; and he declares that the whole of these creatures put together do not produce seventy-five children a year; an appalling loss to the State, exclaims the philosopher and the political economist! In London the number of prostitutes, private and public, has been variously estimated at from 50,000 to 80,000; while in the United Kingdom of Great Britain it is supposed to amount to nearly 400,000! Of these women it may reasonably be inferred that from fifteen to twenty per cent. are laboring under venereal diseases, which they must necessarily communicate to the men who cohabit with them, and these men, in turn, to other women, or, if they are married, to their wives, and through them again to their offspring. Thus, both

* The Westminster Review, p. 101-2, July, 1869.

† Etude des Causes de la Mortalité Excessive des Enfants, p. 65, 1872.

sexes become so many centres of inoculation and so many plague spots, far more pernicious in their influence upon the national health than the pestilence that "walks in darkness."

The *mortality* from syphilis is influenced by various causes, the principal of which may be thus stated: the constitution of the patient, as to whether it is naturally vigorous or the reverse; his habits of life, as to whether they are regular or irregular, temperate or intemperate; the nature and amount of his food, as to whether it is nutritious and sufficient in quantity; his occupation; the air he breathes, the clothes he wears, the amount of labor he performs, and various other circumstances which will readily suggest themselves to your minds. Whatever has a tendency to impair the digestive and assimilative functions, and to exhaust the vital powers, must necessarily augment the dangers of the disease and lessen the chances of ultimate recovery. Although among the better classes of society few persons perish from the immediate effects of the malady, many die from the more remote effects, and from the effects of intercurrent and interdependent disorders, induced by the injurious agency of the syphilitic virus. Here, again, unfortunately there are no statistics to guide us in forming even an approximate estimate; but, taking into consideration the great damage sustained by the general system during the malady, the malign influence it exerts both upon the blood and the solids, the derangement it causes in the secretions, and the predisposition it establishes to morbid action in the more important internal organs, the mortality must be very great. A state of constitution is thus engendered, known as the "syphilitic cachexia," clearly denotive of the sad havoc that has been inflicted upon the general system, too often the forerunner of a speedy dissolution. The whole system is surcharged with the specific virus, the powers of life are completely sapped, the countenance has a sad, careworn, and cadaverous expression, assimilation is suspended, the circulation and innervation are at their lowest ebb, and every species of treatment is utterly useless. When this state of the system exists, even in a com-

paratively slight degree, the dangers from ordinary diseases, accidents, and surgical operations must be vastly augmented.

Race exerts an important influence upon the progress and termination of syphilis. The blacks on the western coast of Africa, and the colored people of this country are notoriously bad subjects. The inhabitants of the islands of the Pacific, and many of the Indian tribes of North and South America, are rapidly disappearing under the effects of this disease. The Sandwich Islands are in great danger of being completely depopulated by it. The mortality from syphilis on these Islands is absolutely appalling. Dr. John G. Brooks, writing in 1873, affirms that the spread of this disease has been so rapid, and its consequences so fatal, that in less than a century the population has been reduced nearly 75 per cent. Of the truth of this statement there can be no doubt, as it has been fully confirmed by the investigations of other observers, especially of Dr. G. Trousseau and Dr. McKibbin, of Honolulu. Although both gonorrhœa and syphilis existed prior to the arrival of Capt. Cook in 1778, the latter malady does not appear to have possessed the malignancy which it assumed soon after the sailors began to cohabit with the native women. Owing to the ignorance of its true nature, no successful attempts were made to arrest it until after the arrival of the missionaries in 1820. During this interval, a period of upwards of forty years, many thousand persons fell victims to its ravages. It is an interesting fact, fully settling the question of the unicity of the disease, that the primary affection almost invariably manifests itself in the form of a soft, simple, or multiple sore, and suppurating bubo, furnishing auto-inoculable pus. Hard chancre, especially in women, is almost unknown in the Islands.

The mortality from this disease in young children, as already hinted, is very great. In Philadelphia and New York the loss of life from this cause, counted for several years, in children under five years of age, is 80 per cent., if we may credit the statements made by Dr. Sturgis in the "American Journal of Syphilography." The number of abortions and miscarriages

occasioned by the syphilitic poison is incalculable. In one instance, recently under my observation, a highly respectable lady, the wife of a government official, a very small, slender, delicate woman, has, during her married life of fourteen years, had five living children, nine abortions, and two miscarriages. Of the five children born alive only three are now living, and the youngest, two and a half years old, is exceedingly feeble and unhealthy. The other three children that were born alive died young. Three abortions have occurred since the birth of the last child; several between him and his elder brother, now upwards of twelve years of age. The father is a man of large size, of stout, muscular development, apparently in perfect health. I have not made any inquiry about the existence of a syphilitic taint in the parents, their social position forbidding it. In another case the woman had, successively, thirteen abortions and miscarriages. She was at length delivered of a child at the full term, which was seized soon after birth with jaundice, and died in less than ten days of umbilical hæmorrhage. Every obstetrician at all extensively engaged in practice can bear testimony to the frequency of these accidents. Dr. Barnes, of St. Thomas' Hospital, London, says, "it is not an uncommon thing for a woman to suffer five, six, seven, or more abortions and premature deliveries, and never to have a healthy chil.d"*

It has frequently been asserted that the syphilis of to-day is a much milder affection than the syphilis of former times. Its epidemic outbreak toward the close of the fifteenth century, as has already been stated, was attended with peculiar virulence. It was, in fact, in more senses than one, a genuine pestilence, killing large numbers of persons, and causing everywhere the most terrible consternation. The sufferers were regarded as out-casts, shunned alike by society, their families, and their friends, under the conviction that the very air they exhaled from their lungs was contaminated, and, therefore, capable of propagating the infection. The treatment was altogether em-

* Report on the Extent of Venereal Diseases, p. 26.

pirical, and immense numbers perished who, under the modern system of treatment, might have been saved. Little attention was paid in ancient times to hygienic measures, or even to a proper regulation of the diet; and, as to the iodides, as they are called, they were, of course, unknown. Bad forms of syphilis are by no means uncommon even at the present day; but they are met with chiefly among the lower classes of prostitutes, sailors, and lascars, whose health has been vitiated by all kinds of excesses, by insufficient food, by mental distress, by foul, damp air, and by analogous causes which it would be needless to specify.

4th. We may next inquire briefly into the *indestructible* character of the syphilitic virus. How long does this infection last? Do its effects ever die out? Is the taint of the system thus engendered eradicable by treatment? These are startling questions, answered differently by different observers, and, therefore, far from being satisfactorily settled. The idea has occasionally been advanced that syphilis, like small-pox, measles, and scarlatina, is a self-limited malady, tending, in persons of a sound, vigorous constitution, to spontaneous cure; but such a view is certainly not borne out by the facts of the case. The disease, if left to itself, never wears itself out; its character may be altered or modified, but the poison, like an enemy in ambush, still lurks in the system, ready to explode, with full force, upon the slightest deterioration of the general health. I have repeatedly witnessed cases in which the poison remained in a state of latency for ten, twenty, thirty, and even forty years, the individual being, apparently, perfectly well all the time, when, either suddenly or gradually, from some intercurrent disease or accident, it broke out in some particular structure, tissue, or organ of the body, perhaps selecting a spot hardly the size of a dime or twenty-five-cent piece for the theatre of its operation, and the development of its zymotic action. The reason, probably, why such cases are not more frequently met with is that life is destroyed before the virus is placed in a condition for the exhibition of its peculiar effects. Judicious medical treatment

and proper hygienic observances will go far, in a person previously in sound health, in maintaining the poison in a latent condition, or, what is the same thing, preventing its zymotic or explosive action. The iodides, as they are termed, although they are not, in the true sense of the word, specifics, yet they approach this property as nearly as it is perhaps possible for any medicine to do, quinine and arsenic, as antiperiodics, not excepted. They are remedies of inestimable value; but even these, however judiciously or perseveringly employed, seldom, if ever, completely eradicate the disease; they may, and often do, at least for a time, arrest its progress, and improve the general health; but sooner or later, upon the slightest deterioration of the system, the specific phenomena again appear, either in a similar or different livery, and thus the case may progress for an indefinite period, the patient being either finally worn out by it, or perishing from some intercurrent disease. In the poorer classes, more particularly in the ill fed, half-starved, overworked, and in the lower and more degraded orders of prostitutes, even a temporary cure, or a transient restraint of the zymotic action of the poison is not always possible, and certain it is that such persons are seldom, if ever, permanently cured. On the contrary, many of them die early, either from the direct effects of the disease, or from intercurrent affections, to which the system, weakened and degraded by the virus, now falls an easy prey.

5th. If the statements now presented be true, it must necessarily follow that a disease, the specific principle of which remains so long in the system, must have, so to speak, many outgrowths hanging, like Lethe, upon the outskirts, and exhibiting themselves in a great variety of forms, often described, as so many separate and independent affections, under different names. What is called *scrofula*, struma, or tuberculosis, is, I have long been satisfied from careful observation of the sick, and a profound study of the literature of the subject, in the great majority of cases, if not invariably, merely syphilis in its more remote stages. It is, in short, a proteiform malady, ca-

pable of assuming a great variety of forms, often as difficult to distinguish as it is to treat them. In its original sense, the word struma had a very limited signification. Hippocrates, Galen, Celsus, Oribasius, Ætius, and other early authors, restricted it to glandular enlargements of the neck, axilla, and groin. The word scrofula, for centuries past in such common use, has, as is well known, a special import with respect to the deformed condition of the neck, assimilating it to that of a swine. At the present day the affections included under this denomination amount to upwards of twenty. Among the more common are chronic enlargements of the lymphatic glands, various eruptions and ulcerations of the skin, embracing the milder forms of lupus, chronic abscesses, especially psoas and lumbar, Pott's disease of the spine, psorophthalmia, chronic amygdalitis, caries and necrosis, ozæna, certain inflammations of the eye, known as strumous, coxalgia, otorrhœa, rickets, arachnitis, hydrocephalus, pemphigus, sycosis, keratitis, and the notched and irregular condition of the teeth of infants and children, so ably described by Mr. Hutchinson, of London. The affinity of scrofula and phthisis is now well established. That all those affections are of a syphilitic origin I will not pretend to assert, but that most of them are, I am abundantly satisfied from personal experience. It must be within the recollection of every one of the older members of this Association, that many of the diseases formerly designated as scrofulous have, thanks to the researches of modern laborers, been proved, beyond the possibility of doubt or cavil, to be of a syphilitic nature. In the early part of my professional life I was accustomed, in common with older and wiser men than myself, to look upon every person who had lost his nose by disease, whose nostrils exhaled a fetid odor, who had been deprived of his palate, or who had obstinate sores upon the skin, caries, necrosis, or enlargement of the bones, as laboring under scrofula, considered as a distinct and independent malady. Closer observation and a riper experience, both private and hospital, have shown me the fallacy of those views, and proved that these and many kindred affections

were then, as they are now, of a purely syphilitic character. The doctrine that scrofula is generally, if not uniformly, merely a transformation, a degeneration, or a remote effect of the syphilitic virus, was entertained, long ago, by Astruc, Rosenstein, Camper, Stoll, Selle, Portal, Alibert, Richerand,* and others, and has found its ablest advocate, in our day, in Lugol, of Paris, in his great work, entitled "Researches on Scrofulous Diseases," published upwards of thirty years ago. No one can read this production without rising with the conviction that its author was a most accurate and patient observer, a truthful recorder of facts, and a man of the highest analytical genius and powers of generalization. The vast progress that has been made within the last third of a century in the study of syphilis, considered in its various forms and phases, has done a great deal in reconciling the conflicting views that formerly divided the medical world upon the subject, by inducing practitioners to regard it in the light of modern experience. The powerful minds that have been directed to these investigations have cleared away a vast amount of rubbish, and firmly established the fact, now universally recognized, that the syphilitic virus is capable of infecting every particle of living matter, and, consequently, of producing changes in the organs and tissues of the most diverse character, not even dreamed of forty years ago.

It has been argued that, because scrofula is not, like syphilis, a contagious or inoculable disease, it can not, therefore, be of a syphilitic origin. Such an assertion simply proves nothing; it is, in fact, a mere begging of the question. The force of the vaccine virus is much diminished, and, in many instances, entirely lost, after several generations of vaccination, and the same is true of all infectious or contagious matter whatever. Its natural tendency is, in time, to lose its virulence, and eventually to die out, or to part with its specific properties. Scrofula, however, is generally, like syphilis, an hereditary affection. In how many generations it may retain its specific powers before it is finally deprived of them, we have no means of determin-

* Diction de Med. et Chirurg. Practique, v. xiv., p. 581.

ing. The children of phthisical parents are almost invariably strumous, and the taint thus engendered often runs through several generations, uprooting, not unfrequently, entire families. On the other hand, it sometimes skips a generation, and reäppears in the next succeeding one, just as family likenesses sometimes do: still it is scrofula, and nothing but scrofula.

Lastly, the effects of treatment lend powerful support to the doctrine of consanguinity of scrofula and syphilis. The efficacy of the iodides and of mercury in the treatment of scrofula is familiar to every practitioner, and the same remedies, as is well known, are almost as truly entitled to the term "specific" in the treatment of the tertiary and quarternary forms of syphilis as quinine in the treatment of intermittent fever and malarial neuralgia. The active ingredient in Swaim's panacea, which has acquired a world-wide celebrity in the treatment of the so-called scrofulous complaints, is bichloride of mercury, the article which has effected such wonders in the cure of struma of certain royal personages in Europe, South America, and other countries; men who attested their gratitude to the inventor of the panacea by costly presents in jewelry and in valuable testimonials.

To show the intimate connection between scrofula and syphilis, I shall here relate, from my own practice, the subjoined cases, which, not many years ago, would have been regarded as of a non-syphilitic nature.

A married man, thirty years of age, and the father of three children, consulted me last December on account of a catarrh of the nose, from which he had suffered from early childhood. He takes cold very easily, and wears the thickest and warmest garments to protect himself from atmospheric vicissitudes. The discharge from the nose is generally very profuse and fetid, despite the frequent use of the douche. He has one brother and four sisters, who are all similarly affected. His father, who died at the age of thirty-five from the effects of external injury, was always in delicate health, and the subject of ozæna. The mother was always healthy. The brother had three chil-

dren, one son and two daughters, who, although well formed and apparently healthy, are, nevertheless, affected with ozæna, attended with offensive discharge. His wife has had repeated abortions.

A girl, six years old, the daughter of a dissolute man, was brought to me in May, 1873, by her uncle, a medical practitioner, on account of ulceration of the palate, with destruction of the tonsils, an opaque speck on the cornea of the right eye, otorrhœa, ozæna, a sore on the inside of the left ankle, and enlargement of the tibia, all of upwards of one year's standing, and pronounced by two old and experienced physicians in the town in which she lives to be scrofulous. The upper front temporary teeth are much decayed, and a permanent one, the only one cut, is stunted and crooked. The child is sufficiently well grown, but her complexion is muddy, and she is lame in her left leg, owing to its diseased condition. The mother is laboring under well-marked symptoms of constitutional syphilis. The work of Lugol, previously alluded to, abounds in cases of a similar kind. Diday, in his "Treatise on Syphilis in New-born Children and Infants at the Breast," relates a number of instances; and, in fact, there is hardly a writer on the subject who does not afford illustrations of a similar nature.

A case reported by Dr. C. Drysdale, of London, is admirably illustrative of the subject under discussion. A girl, twenty years of age, had notched upper incisors, interstitial keratitis, and scars at the angles of the mouth. During childhood she suffered from fits and abscesses of the thighs. Her mother, who was forty-two years old, and married at the age of seventeen, had been infected by her husband. She had falling of the hair and sore throat, with cutaneous eruptions, and miscarried soon after her marriage. The next child was healthy, and alive and sound at the age of twenty-four. The third child was still-born; the fourth, at three months, had snuffles, and an abscess on the buttock; the fifth lived only thirteen days; the sixth was still-born; the seventh, at the age of sixteen years, had glandular swellings in the neck, and was very weak and stru-

mous-looking; the eighth, at twelve years, was very feeble and scrofulous; finally, the ninth, at five years and a half, was thick-lipped, pallid, and affected with cervical abscesses. Of eleven children born of this woman, only five were alive when the case was published.*

The connection between syphilis and phthisis, as cause and effect, has recently attracted much attention, and has been warmly advocated by a number of writers, among others by no one more ably than by my friend, Professor Furneaux Jordan, of Birmingham, England. I have myself long been a firm believer in this doctrine, and I can not see how any one who has much experience in this class of diseases, or who has made himself familiar with the literature upon the subject, could come to a different conclusion. Mr. Jordan very justly says we can manufacture strumous diseases at pleasure, since all that is necessary is to bring into contact two persons affected with hereditary syphilis, and they will be sure, especially if, in addition to this taint, they have a muddy complexion, to produce children, one of whom will have phthisis, another Pott's disease of the spine, a third coxalgia, a fourth enlarged glands, or hydrocephalus. If acquired be added, he further remarks, to the inherited syphilis, the result will be still more certain. "The frequency of so-called consumption," says Sir William Jenner, "and of cases of so-called scrofulous diseases in the child, that are also due to inherited syphilis, becomes daily more apparent."

But it is asserted that phthisis can not be an offspring of syphilis, because phthisis occurs in monkeys when confined in our menageries. All this is true, and yet it does not prove that the disease may not have such an origin. Has any one studied the habits of these animals in their native forests, in such a manner as to be able positively to assert that syphilis is not one of the disorders incident to promiscuous intercourse among them? It is a well-ascertained fact, established by the experiments of Auzias-Turene and others, that monkeys are

* London Med. Times and Gazette, p. 287, 1868.

remarkably susceptible to inoculation, and that not a few perish afterwards from the effects of phthisis. If, as Darwin declares, we are descended from these animals, is it not reasonable to suppose that they are subject to the same diseases that we are? Nay, further, may we not have inherited syphilis directly from them, as a legacy from our illustrious progenitors? I propound this question for the solution of the sophists.

It must be confessed that it is often difficult, and sometimes impossible, to get hold of the links necessary to construct the chain which connects the two diseases. The great obstacle consists in obtaining satisfactory information concerning cases extending back a number of generations to persons long since dead. Parents who have syphilitic children are reluctant to acknowledge the fact. I have often had occasion to notice this, not only in private, but in hospital practice. Women, in particular, are prone to conceal everything affecting the character of their offspring, especially when it relates to so delicate a matter, however closely they may be interrogated.

It is but justice to say that many of the most illustrious pathologists of the present day, in all parts of the world, still adhere to the old notion that scrofula is essentially a disease of the general system, dependent for its development, not upon a syphilitic taint, but upon various debilitating causes, giving rise to a depraved condition both of the blood and solids, and, as a natural sequence of this condition to tuberculosis, or actual deposits of tubercular matter. I can not help referring here to a remark of Richard Wiseman, Surgeon to Charles I. and Charles II., as illustrative in at least one respect of my own views upon the subject under discussion. In speaking of scrofula, in his elaborate chapter upon that disease, he says external accidents, as blows and falls, are often occasional causes, but they always pre-suppose the existence of a predisposition to its development; and that this is true is, I am satisfied, most thoroughly established. Without such a predisposition, germ, or morbid ailment in the system, scrofula can not possibly arise, no matter what injury might be inflicted, or to what hardships

and depressing influences the body might be exposed. How far this predisposition is due to the syphilitic poison, I have already repeatedly affirmed in the course of this address.

A few remarks in regard to the prevalence of scrofula must close this branch of the subject. Here, again, we have to lament the want of reliable information, so desirable in the settlement of a question of such magnitude and importance. That the disease is widespread, that it has a deep and an abiding hold upon the human race, and that it is annually causing a frightful mortality, either directly or indirectly, no one at all acquainted with this malady will, for one moment, doubt. I assume that upon this subject all enlightened practitioners are agreed. How extensively it prevails in this country is shown by the fact of the 6,000 newspapers published in it, there are very few which do not advertise some remedy for its relief.

Of the extraordinary prevalence of scrofula among some of the royal families of Europe and South America, some idea may be formed from the numerous costly presents received by a late celebrated charlatan of this city on account of the cures which he is said to have effected with his Panacea, still in such frequent use in this and other countries. The ghastly pictures which illustrate one of his brochures, abounding in testimonials from distinguished physicians, clergymen, congressmen, and judges of courts, clearly prove that his cases of scrofula were, for the most part, if not in every instance, simply aggravated cases of syphilis.

In the United Kingdom of Great Britain, scrofula, says Mr. Richard Barwell,* a name well known in America, is so common that it would be below the truth to affirm that at least three-fourths of the people have the seeds of that malady in their constitutions. The Registrar-General's Returns, continues this writer, show that for the week ending January 2, 1864, 224 persons, chiefly children, died within that period of one particular form of scrofula in London alone. Such facts prove that there is a blight upon the children, transmitted from the

* Guide in the Sickroom, p. 3, London, 1864.

parents, "rendering their life sickly, their death premature." Appalling as they are, they attract little or no attention. A great pestilence, like cholera, small-pox, or typhus fever, startles a whole community, and every one asks for a remedy; the church offers up her vows to God; and the physician is entreated for his aid and counsel; but when a pestilence, like struma or syphilis, stalks about in our midst, poisoning the very fountains of health and life, people fold their arms and look on in blind unconcern. Sir Astley Cooper, upwards of a third of a century ago, in speaking of this disease, remarked: "I do not exaggerate when I say that within the last year I have seen 500 cases of scrofulous affections; never a day passes without my seeing a case, and frequently three or four."

"Strumosis and tuberculosis," says Sir William Jenner,* "have no place in the Registrar-General's Returns; and yet to the preëxistence of these diseased states, in a large proportions of cases, is due the death in scarlet fever, in measles, whooping-cough; and but for these states how large a number of cases of Bright's disease, hepatic disease, and puerperal mischief would never have occurred." In Great Britain, according to the same distinguished authority, rickets causes, primarily or secondarily, more deaths than any other disease of childhood." "Although a preventable disease, yet," Jenner declares, "the mortality from rickets, from diseases which would not occur but for the preëxisting rickets, and from diseases which would be trifling but for the coëxisting rickets, is enormous. Laryngismus stridulus, chronic hydrocephalus, teething, convulsions, atrophy, disease of the spleen and liver, remittent fever, tabes mesenterica, spinal disease, bronchitis, diarrhœa, measles, whooping-cough—these are some of the names under which deaths, really due to rickets, appear in the Registrar-General's Returns." Although Jenner repudiates the idea that rickets is a syphilitic disease, there are many able pathologists who positively attribute to it such a paternity, a view in which I fully and unhesitatingly concur. Rickets, in a large propor-

* Practical Medicine of To-Day, p. 42, London, 1869.

tion of cases at least, is only, as has been justly observed by a foreign writer, the grandchild of syphilis.

It may be assumed, as an incontrovertible fact, that scrofula is most common wherever syphilis has the firmest hold upon a people. It never was more rife than it was for the first hundred and fifty years after the great syphilitic epidemic near the close of the fifteenth century, which, as was previously stated, affected vast numbers of persons both on the continent of Europe and in the British Isles. The disease is exceedingly frequent in the Sandwich Islands,* in the East and West Indies, in China, Japan, and Africa, where syphilis is known to prevail in its worst forms. Among some of our Indian tribes it is a very common disease, and the colored races of the United States are, as is well known, remarkably subject to it.

There is one form of scrofula which, although formerly very common, and remarkable as having given rise to the name by which it has for ages been best known, has greatly decreased in frequency, and, in some regions, almost wholly disappeared. I allude to glandular swelling of the neck, axilla, groin, and mesentery. Of these affections, especially the first, which were exceedingly common in my early professional life, and which have always served as the characteristic types of struma, I have for years past rarely met with any cases. If I were asked to what this change is due, I should unhesitatingly say change of treatment, consisting mainly in the more judicious use of mercury. There was a time when this remedy was almost exclusively relied upon in the cure of this disease, and it was during the reign of the mercurial treatment that scrofula of the lymphatic glands, especially of those of the neck, was at its greatest height.

In Ireland, where in consequence of the influence of the authority of the late Mr. Colles, this agent is still very generally employed in the treatment of syphilis, the "swelled neck," as I am informed by my friend, Dr. McDonnell, an eminent surgeon of Dublin, and as I myself ascertained from personal observa-

* Dr. McKibbin's letter to me, April 4, 1874.

tion during my visit to Europe in 1868, is still of very common occurrence. In England, on the contrary, where a more rational mode of management obtains, the affection has greatly decreased in frequency and severity, and this is also true of this country, and of continental Europe generally.

Mercury was for centuries looked upon as the touchstone in the treatment of syphilis, and the extent to which salivation was generally carried, it is difficult at the present time to credit. It was simply fearful. The remedy was administered in enormous quantities, and was, therefore, not unfrequently more destructive than the disease it was intended to relieve. Wiseman* directed the patient to take from twenty to thirty grains of calomel at a dose, to be followed by a few grains of turpeth mineral, the prescription to be continued until, to use his own words, his "chops swelled." This, as he informs us, was the mildest course, however slight the attack.

Dr. William Salmon, in his "Ars Chirurgia," the like, to use his own expression, of which was never yet published in any language, issued at London, in 1869, in speaking of the treatment of syphilis, strongly recommends, as the greatest of all internal "salivatories," calomel, or, as it was formerly called, mercurius dulcis, in doses varying from twenty to thirty, or even forty grains, given every night at bedtime until the remedy begins to show its specific effects upon the salivary glands, when it is to be laid aside, to be resumed, however, in the event the flow is not sufficiently copious. The same author also recommends the inunction, at one sitting, of two ounces of mercurial ointment, and the employment, if necessary, of mercurial fumigations. When the system was fully impressed, the flow of saliva gradually increased for eight or nine days until it reached its height, "which," says the good Salmon, "in persons of moist and gross habit of body may come to four, five, six pints in a day and night, and to others in less proportion." The salivation generally lasted from twenty to thirty days, and was, as might have been expected, attended with enormous

* Chirurgical Treatises, Book viii., p. 507, 1686.

swelling of the tongue, mouth, and throat; ulceration of the mucous membrane; and inflammation of the gums, jaws, and teeth, the latter of which often dropped out of their sockets.

Hermann Boerhave, so justly distinguished in his day for his profound erudition and practical acumen, laid it down as a general maxim that, in the treatment of syphilis, every particle of fat must be drawn off from the body, otherwise the least possible remnant would lead to a relapse. "If," he remarks, "patient spits three pints, or two quarts, in the twenty-four hours, it is sufficient; but if he spits less, more mercury must be given." Astruc,* in his work on Venereal Disease, speaks of the creation of useful ulcers in the mouth by salivation, alleging that they are wholesome in promoting discharge and purifying the system. Lombard, of Strasbourg, who wrote upon the same subject towards the close of the last century, states that the practice in France, even at that day, in the treatment of this affection, was to cover the body all over with mercurial ointment, in order to cause profuse ptyalism. This frightful practice, which projected itself far into the present century, has, strange to say, still some adherents, although it is not carried to the extent it was in former times. The result of this inordinate use of mercury, in many cases, was the establishment of a degraded and poisoned state of the system, known as the mercurio-syphilitic disease, from the effects of which few persons ever perfectly recovered. To the English physicians and surgeons, engaged in the Peninsular war, the Medical Profession owes a deep debt of gratitude, and the world at large undying obligations for having shown that syphilis, in nearly every form and stage, may generally be satisfactorily, if not successfully, treated without the aid of this metal.

In regard to the alliance of *leprosy* with syphilis, there still exists the greatest possible divergence of sentiment. While some very able pathologists consider the two diseases as identical in their nature, as having, in fact, a similar origin and the

* Book iv., chap. vii., p. 71, 4th English edition.

closest interdependence; others, and these constitute by far the more numerous class, equally distinguished for their learning and intelligence, look upon them as essentially different affections, both as it respects ther causation, march, symptomatology, and treatment. The link which connects syphilis and lepra is certainly not well defined. It is, however, acknowledged on all hands that the lepra of the present day, as it exists in Europe, especially in Norway, Sweden, and Denmark, is identical with the lepra of the East, so graphically described by Moses, and known in his day as a most contagious malady, against the extension of which he enacted the most stringent laws. I have already expressed the conviction that this disorder, as it occurred in two celebrated biblical characters, was nothing but a bad form of syphilis—syphilis in its tertiary form, as it is now called—and it seems to me that no unprejudiced man can read the accounts of lepra of Northern Europe, as portrayed by the able pens of Boeck and Danielsen, of Norway, without being satisfied that it is merely a variety of syphilis, modified by the effects of climate, modes of life, and other causes. The people most liable to suffer from lepra in those countries are residents of the sea-coast, mostly sailors and fishermen of the lowest and most filthy habits, men who live principally upon salt food, and hardly ever wash themselves from one year's end to another. That the disease, under such circumstances, should generally be unusually obstinate, often intractable, and sometimes fatal, is not at all surprising. The symptoms of lepra strikingly resemble those of syphilis in its more remote forms. Among the more constant and prominent are, nocturnal pains in the legs, various kinds of eruptions of the skin, and red or livid tubercles, often terminating in ulceration, falling of the hair of the scalp, eyebrows, and face, loss of the palate, nose, and tonsils, caries and necrosis of the bones, and, in short, all the more marked phenomena which characterize syphilis in its constitutional types. When we add to these lesions the fact that lepra is always hereditary and not infrequently infectious, it may, I think, fairly be assumed that, if

lepra be not syphilis, it so closely resembles it as to render it impossible to assign to it any other plausible, much less distinct paternity.

In the Sandwich Islands, where the population since 1832 has been reduced from 130,000 to 57,000 as shown by the last census taken in 1872, owing very largely to the effects of syphilis, leprosy has, during the last ten years, spread with fearful rapidity among the natives. From a letter kindly sent me by Dr. Robert McKibbin, of the Queen's Hospital, Honolulu, dated April 4, 1874, I learn that since January, 1865, 1212 persons affected with this disease have been sent to the settlement in Molokai, where, at the present moment, there are upwards of 700. In addition to these, large numbers, hidden away by their friends, have died at their own homes. "That leprosy has a close connection with syphilis," says Dr. McKibbin, "I am quite satisfied; in fact, I consider it to be the chief cause of its rapid spread. I have had at the Queen's Hospital, and in my own practice, a large number of syphilitic cases terminate in this disease. Uncertain or mixed cases frequently present themselves, in which, as a rule, immediately, or very shortly after, the syphilitic symptoms give way to treatment, which they invariably do, thus often affording delusive hopes of recovery, symptoms of leprosy in its most virulent forms are ushered in, and the disease runs a more than usually rapid course, terminating, as it always does, fatally."

"My experience and observation," he continues, "clearly teach me to believe that leprosy, under certain circumstances, is contagious; hence, if for no other reason, persons affected with the syphilitic taint will *cæteris paribus*, contract this disease when the health will escape."

Dr. G. Trousseau, a son of the celebrated French physician of that name, in a letter to me dated Honolulu, March 30, 1874, declares that, while he believes lepra to be a distinct disease, of all the cachexias the syphilitic is that which predisposes most to its development. O its inoculability he is perfectly convinced. Dr. Trousseau and Dr. McKibbin agree in

stating that the disease in the Sandwich Islands is of very recent origin, not extending back beyond about fifteen years. The leprosy of India, concerning which the English Government has lately instituted energetic inquiry, is, it would seem, a non-contagious but hereditary and incurable malady, the etiology of which is enveloped in complete obscurity, notwithstanding the labored attempts that have been made to elucidate it.

In attempting to form an opinion regarding the nature of lepra, we must not lose sight of the fact, universally admitted by the opponents of the identity of lepra and syphilis, that it is often extremely difficult, and sometimes utterly impossible, to establish a correct diagnosis between cutaneous maladies, such is their liability to run into and mask each other. The wisest and most distinguished dermatologist is not always exempt from this embarrassment.

6thly. The *treatment* of syphilis, the last subject it is proposed to examine, necessarily divides itself into curative and preventive, the latter including the consideration of prostitution and its effects upon the national health.

The first of these topics has already been sufficiently discussed for the purposes of this paper. I have endeavored to show that, when the syphilitic virus has once taken full possession of the system, no mode of treatment, hitherto devised, is capable of permanently dislodging it, or of neutralizing its effects. All that can be done, even with the aid of the most approved remedies, as the different preparations of iodine and mercury, is to stay for a time its action; for, even under the most favorable circumstances as to health and regularity of life, it will be almost certain, sooner or later, to take on zymosis, and to break out into an open flame, fastening itself upon some particular portions of the body, and thus gradually, if not rapidly, undermining the general health.

If these statements be true, and no one, I am sure, will gainsay them, it necessarily follows that the prevention of the disease is a matter of far greater moment than the attempt to

cure it after it has been developed. If proper precautions were observed in impure connections, much of the danger of inoculation might be effectually avoided. Cold water, simple or medicated with some astringent substance, as alum, sugar of lead, common salt, or chlorinated soda, used judiciously, immediately after the commission of the act, generally completely neutralizes or washes away the infectious matter, and thus insures immunity from future mischief. Few persons, however, are aware of the importance of such precautions, or, if they are, they neglect their employment until it is too late to reap any benefit from them. The condom offers but a feeble resistance in the act of copulation against the dangers of infection, and is comparatively little employed, except by men in the high ranks of life. The sailor, the soldier, and the human sensualist resort to no such devices. The tar may occasionally use his bandana, but this affords no real defence against inoculation; nay, if we may credit his veracity, not even against the possibility of conception. It surprises one to learn that the condom, still in such common use in France, incurred the ill will of the Pope, who, in 1826, issued a Bull condemning the invention as a means of counteracting the decrees of Providence, who wishes to punish prostitutes on account of their heinous sins! Did not a Pope once issue a Bull against a comet, and did Martin Luther not throw his inkstand at the devil?

The treatment of syphilis by what is termed syphilization, originated by Auzias-Turenne, of Paris, in 1844, and since so pertinaciously carried out by Sperino, of Italy, and Boeck, of Norway, besides being extremely filthy and disgusting, has been shown to be an entire failure. Dr. Adam Owre, writing in 1868, declares that no permanent benefit has resulted from it even at Christiania, where it has been practiced in many hundred cases within the last twenty-five years, with every possible care and assiduity, under the direct supervision of its great and enthusiastic advocate, Professor Boeck. Similar views have been expressed by other writers and practitioners. Of the insufficiency of syphilization to eradicate the poison of

the disease, no better proof is needed than the numerous relapses which follow the operation, and the fact that offspring of women while undergoing this treatment are invariably infected with hereditary syphilis, precisely as after any other mode of cure hitherto employed. There is no analogy between vaccination and syphilization. A few punctures suffice to complete vaccination; whereas syphilization requires hundreds, extending over a period of many months.

Inasmuch, then, as no preventive measures hitherto devised are at all trustworthy, inasmuch as the sexual passions must and will seek indulgence, and inasmuch as the greatest risks of infection occur at brothels or in houses of ill-fame, the question arises, how, or in what way, may these risks be reduced to their greatest minimum? A wide field for useful exertion is here opened. We send missionaries among the heathen in foreign lands, but neglect this fearful plague-spot at our own doors and at our own fireside. We think it a fine thing to convert a savage to christianity, and so it doubtless is; but we permit our own brother to contract a loathsome disease, one that will effectually poison not only his own system, but taint and infect his offspring unto the third or even unto the fourth generation. The only remedy for this evil is the licensing of prostitution, a remedy which has worked so well on the continent of Europe and in England, as to deserve to be introduced into this country, where, as abroad, under proper restrictions, it could not fail to be productive of vast good in promoting the national health and lessening the mortality from numberless diseases more or less dependent upon the prejudical effects of the syphilitic virus. To legalize crime, as prostitution has always been considered to be, is to arouse at once the worst prejudices of the public, and to excite the bitterest opposition, on the ground that such a measure would tend to encourage vice and immorality. But would the licensing of brothels or houses of ill-fame really have such an effect? I answer unhesitatingly, no. On the contrary, it would tend greatly to diminish both, at the same time that it would greatly lessen

the dangers of syphilitic infection. Viewed from this standpoint, a standpoint of a purely hygienic character, the question assumes a national importance, and it becomes our solemn duty, as the representatives of a great and learned profession, to look it squarely and boldly in the face, in utter disregard of the fact that it is tabooed in certain quarters or by certain classes of people who are entirely unacquainted with its merits. The prejudices that surround it must be swept away, and men must march to the front and discharge their duty, however much they may be abused or reproached for their conduct by the ignorant and foolish. "Positive action must be organized to check positive evil, to promote the public good, and to heal the festering sore under which the country has so long groaned." All must lend a helping hand in the great enterprise, the physician, the legislator, the philosopher, the philanthropist, the churchman, and the politician; nay, woman herself should not be kept in the background. She, too, should give it her influence. The fact that the subject is attracting general attention in this country shows that our people are in earnest about it. In St. Louis, which has taken the lead in this matter, prostitution was legalized several years ago;* in Cincinnati attempts have been made in the same direction; the Legislature of Illinois recently had the matter under discussion; and in January of the present year, the grand jury of Philadelphia, in its presentment to the court, urged the adoption of some legal measure for the protection of society against the spread of venereal

* Since this address was written, the Legislature of the State of Missouri has seen fit to repeal the ordinance regulating prostitution in St. Louis, on what grounds does not exactly appear. Doubtless the prejudice of the religious portion of the community is entitled to the principal credit in bringing about this result; for we are told in an editorial in the "Missouri Medical Record," of May 15th, that the system had acted most beneficially in the interests of the community and the welfare of the prostitute. Many of the inmates of the House of Industry, influenced by the ministrations of good men and noble women, had been seeking the "purer and better way," and had become so fully aware of the physical advantages arising out of the law, that not a few of them voluntarily subjected themselves to inspection, at their own expense, after the abrogation of the ordinance.

diseases. In March last the Legislature of Pennsylvania took up the subject; an admirable address was made by a member, Dr. Cressler, and a bill was framed, containing numerous provisions for the suppression of this class of affections, so long the scourge and reproach of our race.

One very great difficulty in regard to the practical operations of a licensing law would be the framing of a bill of an entirely unexceptional character. Great judgment and care would be necessary in the selection of a proper title: if this be offensive, or too conspicuous, it would at once call forth opposition. My opinion is that the entire subject should be brought in, as it has been in England, under the head of "Contagious Diseases Acts," a phrase not likely to meet with serious objection, as it would serve as a cloak to much that might otherwise be distasteful to the public. The word "licensing" should not be used at all in this connection, as its purport is liable to be misunderstood, many persons supposing that the "licensing law" is designed to encourage and extend prostitution, in the same sense that a licensed coffee-house, for example, encourages the use of liquor with its attendant vice and immorality. The word "regulate" would be better, but even this has its objections. The provisions of such a bill should be couched in the clearest language, and should be enforced and carried out by the fewest number of officers consistent with their due observance. City councils and city police authorities should be prohibited from serving on the board, the most suitable of which would be the so-called board of health. The examining physicians should be moral and well-educated men, appointed by the Board of Public Charities, with a liberal salary; they should be thoroughly acquainted with venereal diseases, and scrupulously conscientious in the performance of their duties. Inspections should be regularly made at least once every fourth day, or twice a week, and all women found to be unclean should at once be placed in quarantine, or under proper restraint, as the only means of preventing the spread of syphilis.

The greatest opposition to the enactment and the efficient

enforcement of a law licensing prostitution would necessarily come from the clergy and other religious people, who, without understanding the nature of these diseases and their extensive prevalence, too often regard them as visitations of Providence, and every measure of this kind as an unholy attempt to "license shame," "legalize vice," and "encourage crime," and other twaddle, as unmeaning, when applied to such a serious matter, as it is unbecoming a Christian people.*

Regarding prostitution as a necessary evil, an evil which has existed from the earliest periods of society, and which must endure to the end of time, until the angel Gabriel shall sound the last blast of his trumpet to summon together a fallen world, it should be the duty of every right-thinking, rational, progressive man to do all he can towards the suppression of an evil far more pernicious in its influences and effects upon mankind than any of which we have any knowledge, drunkenness not excepted. In reflecting upon this subject, I am sometimes inclined to believe that prostitution is the normal condition of the human race. Or, if we reject this proposition, so offensive to good taste, it must be admitted, beyond the possibility of doubt or cavil, that the practice is so intimately interwoven with our social system as to form an essential part of it. In either event, the evil is a most sad one.

Sexual intercourse is an imperious necessity, implanted in our nature, for the gratification of which man will brave any danger, however great, to health and even life. Whether descended from the ape, or whether created in the image of his Maker, he is still an animal, who, but for the humanizing influences of civilization and Christianity, would be more savage and degraded than the wildest beast of the forest. If this postulate be admitted, it requires no argument to prove that prostitution is an essential necessity of society. If prostitution

* "Philadelphia Medical and Surgical Reporter," 1874. It affords me great pleasure to refer to this journal in connection with the discussion of this question, as it is one of the few medical periodicals in the United States sufficiently thoughtful and independent to place it in its true light before the Profession and the world.

were abolished, crimes of the most heinous and revolting character would be of incessant occurrence, and no virtuous woman would be secure from the assaults of the libertine.

"A large portion of the male population," says Sir William Jenner,* "are, at the age when the passions are the strongest, precluded by the necessity of their position from marriage. Under such conditions, either prostitution, seduction, or masturbation will be the prevailing vice. If by law public prostitution could be put down, the two latter of the three vices would undermine the health and lower the moral nature of the masses far more than does the present prevalence of the social evil. This inverse relation in the prevalence of masturbation, illegitimate children, and prostitution, can not be too strongly impressed on the public mind. All men have a repugnance to referring to these matters, but it is our duty to do it. On the attention of the so-called religious this duty should be especially enforced. Prostitution can not be suppressed by law; perhaps ought to be if it could. But prostitution is necessarily accompanied by syphilis. Syphilis more often than has been commonly believed means death, death to the primarily syphilized and death to his offspring. The spread of this knowledge may have a little effect; but my experience has never yet made me acquainted with the case of a youth made continent with the fears of syphilis; but it has taught me that where a youth is deterred from promiscuous sexual intercourse by the mere fear of contracting disease, he, as a rule, gratifies his desire in even a more discreditable manner. The vicious gratification of a natural desire is the cause of syphilis. If every young man curbed his passions, syphilis might die out. Let teachers of morality and religion endeavor to impress on young men and lads, above all on the latter, the necessity of exercising this restraint. But until they have succeeded in their teaching, it is the duty of authority to prevent, as it could to a great extent, the spread of this terrible disease. Moral teaching may do something; the spread of knowledge, and society can do

* "Practical Medicine of To-Day," p. 46.

almost nothing; but law could do much to diminish the mortality from syphilis. It could prevent the prostitute from plying her trade in the public thoroughfares, and thus keep temptation to some extent out of the way of the merely irresolute and thoughtless; it is a disgrace to authority that it does not frame and enforce such a law. Again, law could check, to a great extent, the wide diffusion of syphilis. A little has been done in this direction; more is being attempted; but something more than the 'Contagious Diseases Act of 1866' is necessary, if the community at large, and not only our troops, are to be benefited."

But it will be said that if prostitution be an evil, instead of licensing it, it should be stamped out. Where is the power to do this? Will the clergyman stamp it out with his Bible, his tracts, and his prayers? the philanthropist with his money and his kindly acts? the legislator with his laws? or the philosopher with his subtile arguments and finely-spun theories? As well might we attempt to dry up the Atlantic ocean, or to arrest the movement of the earth around the sun, as to attempt to arrest prostitution by such means.

Shall we accuse the clergy of hypocrisy, or of willful concealment of the truth? Do they really think that legalizing prostitution is a means of encouraging immorality and crime? Are they not equally interested in the matter with the rest of our citizens? Have they no sons and daughters? Or are their children less exposed to the dangers of contamination than the children of other classes of men? If they will but seriously ponder this matter they can not fail to see it in the light we do. Sin is no respecter of persons. It penetrates all classes of society, and enslaves alike the king in his palace and the meanest subject in his hovel.

The opponents of these laws, so wise and salutary in their tendency, base their arguments mainly upon the ground that they encourage vice and immorality, and restrict the liberty of the prostitute, both as an individual and as a citizen, and that, therefore, they are wrong not only in practice but in principle.

But this is taking a very superficial view of the case. What would be thought of a man who went about deliberately scattering poison, and thus sowing the seeds of death? Is it less criminal to kill a person with the virus of syphilis than with the virus of small-pox, scarlatina, plague, cholera, or ship fever? Are there not stringent laws for the prevention of the spread of these and other contagious diseases? When yellow fever prevails in a foreign country is quarantine not strictly enforced against all vessels touching at our shores? When the cattle-plague prevails is not the importation of cattle strictly prohibited? Prostitution is an occupation, a profession, a trade, a business; and is the degraded creature who follows it and infects those who hold commerce with her any better than the baker who sells unwholesome bread, the woman who poisons her customers with decayed vegetables, or the butcher who sells infected meat, a crime which in the dark ages used to be punished with death? These people do not complain when the market inspector comes along and condemns their rotten goods, because they know that he is only carrying out the injunctions of the law; a law made especially for the benefit of the citizens of the State, who would otherwise be incessantly exposed to the danger of infection in its very worst forms. Is it wrong to shoot a rabid dog, or to restrain an insane person armed with a deadly weapon, dealing his blows right and left in his mad career? Has history bequeathed us no lessons upon this subject? Has not Moses, the greatest and wisest legislator the world has ever produced, laid down definite sanitary regulations in regard to persons infected with venereal diseases? Finally, shall we forget that a sexual sin committed to-day may prove a curse to our offspring generations hence?

But apart from the foregoing considerations, there is another which, from its important bearings upon the courtesan herself, should not be overlooked. Her life is generally a short one, often not exceeding three, four, or, at most, five years. Steeped as she commonly is in misery, poverty, and degradation, she soon seeks consolation in hard drink, and finally sinks under

the combined influence of the syphilitic poison and alcoholic stimulation. The prostitute who is regularly inspected has a much better chance of being cured of her distempers than one who is left to herself, not to say anything of the chance of her eventual reformation under the humanizing influence of kind, soothing treatment, the knowledge and conviction that the world has not entirely forgotten her, or treats her as an outcast—as a man and God-forsaken creature. We have the testimony of Mr. Acton and other observers that the kind treatment shown these poor women by their professional and other attendants has been the means of restoring many of them to virtuous courses, who would otherwise have been lost; not a few becoming afterwards the wives of sailors, and of the lower orders of mechanics and tradesmen.

An appeal to the operations of the license laws in foreign countries will convince the most skeptical of their beneficent influence. Everywhere, in city and in town, in hospital and in barrack, wherever they have been enforced, their practical workings have been of the most salutary character in diminishing syphilitic infection, and improving the moral and physical condition of the prostitute.

At Aldershot, Woolwich, and Windsor the diminution of venereal diseases among the military has been most marked. Mr. Deverell, of the Portsmouth Royal Hospital, at a recent public meeting declared he had watched the progeess of the Contagious Diseases Acts from the first, in their operation upon the sailors, and he believed that a greater blessing had never been conferred upon the army and navy. In the Ionian Islands, at Malta, and in the islands at Corfu, Zante, and Zephalonia, where the registration and inspection of prostitutes are rigidly enforced, venereal diseases have almost wholly disappeared. In this connection the case of the "Calypso," an English ship, will be found to be of great interest. The vessel, during her sojourn at Honolulu, in the Sandwich Islands, where there are no restrictions, had 33 out of 153 of her officers and men down with these diseases. She afterwards went to Tahiti, where,

under the supervision of the French Government, all prostitutes are regularly examined, only three cases occurred during the four months she remained there, notwithstanding nearly all the men had lived on shore.

In 1860, as I have learned from the letter, prevfously referred to, of Dr. Robt. McKibbin, of Honolulu, a law was enacted to mitigate the evils arising from prostitution in the Sandwich Islands, providing that all women living by prostitution should be placed under the supervision of the police, and subjected to regular periodical examination by a medical man, and, if found diseased, sent to a hospital for treatment. Under this management, which was tolerably rigidly enforced for about ten years, the amount of syphilis in the Islands was reduced fully two-thirds. About two years and a half ago the Minister of the Interior, a medical man, from purely personal motives suspended the action of the law, and since then, Dr. McKibbin assures me, syphilis has rapidly increased.

In Brussels the risk from syphilis from intercourse with public prostitutes has been reduced almost to a nullity, and in Paris, Berlin, and Vienna the diminution has been most marked. The great prevalence of syphilis in the French capital is due, in a great degree, to the fact that there are upwards of 30,000 private prostitutes, many of whom are affected with the disease, and, as they are never inspected, are so many hot-beds for disseminating the poison; whereas the 6,000 registered women, who are regularly inspected under government enactments, are comparatively clean and harmless.

Mons. Lancereux, with whose learned treatise on syphilis, published only a few years ago, every physician is familiar, in speaking of public hygiene in its relation to syphilis, says: "All other things being equal, syphilis rages with greater frequency in proportion as prostitution is less watched over"; that is, wherever there is unlicensed brothelism there is the greatest amount of syphilis, and conversely.

It has been alleged, as an objection to the licensing laws, that compulsory examination are demoralizing in their tendencies,

and that they cause a feeling of self-abasement in the prostitute. But is this really so? Is it any more degrading for an impure than for a virtuous woman to be subjected to such treatment? Does not every educated physician at the present day use the speculum in the diagnosis and treatment of female diseases? Is not the prostitute examined with as much delicacy and tenderness as the most refined and elegant woman in Christendom? We have the authority of Mr. James R. Lane, Surgeon to St. Mary's and to the Lock Hospital, London, for stating that, as a rule, these women do not regard compulsory examination with feelings of objection or dislike; but, on the contrary, that they are well contented with the system; and similar testimony is borne by Mr. W. H. Slogget, Inspector of Certified Hospitals in England, in a communication kindly sent me in August, 1872.

The opponents of the licensing law assert that such a law could only proceed from a state of society essentially low, sensuous, and debased, utterly at variance with sound morals and the genius of Christianity. Such assertions are as untrue as they are absurd. Many of the wisest and best men, of all classes and stations in life, both in this country and in Europe, are the avowed advocates of the licensing law, and have employed their time and influence in securing its enactment and its rigid enforcement.

It has been alleged, as an objection to this law, mainly on the statement of Mons. Lecour, Chief of Police in Paris, where this system was originated, where it has been longest in vogue, and where it has been carried to the highest degree of perfection, that, instead of diminishing prostitution, it has served to increase it. However this may be, we have the testimony of numerous writers, professional and non-professional, for asserting that in nothing in France is the progress in science and of humanitarian principles more strongly exemplified than in the modern treatment of its prostitutes.

But I am not waging a war against prostitution. The object of the licensing law is not to prevent this evil, but to arrest the

spread of syphilis, and through the agency of good men and women, to reclaim the so-called "fallen sister." Prostitution, I repeat it, can not be stamped out any more than drunkenness, political rascality, or any other deep-rooted national vice. They are part and parcel of the social evil; the heritage and shame of a people, illustrating the imperfections of their nature, and of the laws by which they are governed.

What effect the establishment of anti-prostitution societies might have in arresting the "social evil," is only a matter of conjecture, as the experiment has never been tried. My impression is that it would, if properly conducted, be eminently salutary; but to render them at all effective, or what they should be, it would be necessary that the State should empower them with the right of prosecuting the offender, in the same manner as persons found guilty of cruelty to animals are now brought under the influence of the law.

How far moral and religious influences, if fully brought to bear upon the subject, might aid in promoting the reform of the "fallen sisterhood," is a question which has not been settled. A public meeting for this avowed object was held in February, 1860, at St. Jame's Hall, London, in behalf of this class of women inhabiting the purlieus of the Haymarket and Regent street. It was headed by a number of benevolent and pious persons, and about two hundred of these fallen women were present. Tea and coffee were liberally served. Eloquent appeals were made, and many of the poor creatures expressed not only a willingness but a great desire to forsake their evil and wretched life, and to return, through the gates of a reformatory, to respectability and usefulness. The actual success of this meeting, in its final results, has, I believe, never transpired; but it must be obvious that all such attempts to "snatch a brand from the fire" must have proved abortive. Tea and coffee are good things in their way; a kind word, timely spoken, has its efficacy; a sermon upon morality has its benefits, but a a loaf of bread, a good warm dress, a comfortable bed, and a sweet breath, have a greater potency, and de more towards re-

claiming fallen women than all the efforts, the eloquence, and the persuasive power of the pulpit and the missionery. Let me be not misunderstood. Let the gospel by all means have its full sway; let God's minister do all the good he can, both publicly and privately; but let him not forget when he sets out upon his Christian errand with the Bible and the tract in one hand to have a big loaf in the other. While he prays for the "fallen sister," and invokes a blessing upon her head, let him not forget to appeal to the good, the wise, and the charitable to furnish her useful occupation for the support of her body and comfort of her soul; otherwise all his efforts will be as mockery in the sight of God, and a sham in the estimation of reflecting and sensible men.

The question arises here, Why or how do women become prostitutes? What are the motives or incentives which induce them to enter upon a life of depravity and degradation, rendering them objects of scorn and contempt with their fellow-creatures, outcasts of society, and unfit for that heritage which is allotted to God's people? The question is easily solved; indeed, the whole matter may be summed up in a few brief sentences: 1. Natural depravity or want of innate moral principle, similar to that which makes a man a thief, a liar, or a drunkard; 2. Uncontrollable sexual passion, similar to that which makes men and boys onanists, and prompts them to resort to all kinds of expedients and crimes to gratify their appetites; 3. Cruel treatment of the parents, driving their daughters from their homes, and thus compelling them to seek asylums among stangers; 4. The wiles of the seducer, by which a girl, under promise of marriage, becomes pregnant, and is afterwards cast off by her family and friends; 5. Poverty, or the impossibility of gaining a livelihood by honest labor; 6. Fondness for dress or show, so common in the female in all ranks of life that it may be regarded as an inherent principle of her nature; 7. The influence of bad company, often aided by privation and a love of liquor, finery, or sexual enjoyment.

To these causes may be added, at least as being eminently

true of our own country, our expensive modes of living, especially of female dressing, which prevent men from marrying women who would make excellent wives, but who, because of this circumstance, are reduced to poverty, for the relief of which refuge is sought in public and private prostitution.

These enactments should not be limited to the female sex; they should be made to apply equally to males. Sailors arriving in port, and soldiers stationed in barracks, should be compelled to undergo thorough inspection before they are permitted to resort to brothels or houses of ill-fame; and every infraction of the law should be visited with condign punishment.

Private citizens, high and low, rich and poor, afflicted with constitutional syphilis, should be restrained from marrying unless they first obtain a certificate showing that the specific virus has been sufficiently destroyed to render such an alliance safe and proper; or, in other and more intelligible language, free from the danger of infecting their offspring. If fœticide and infanticide are crimes, punishable by imprisonment and hanging, is the man who infects his offspring in its mother's womb, and that mother, perhaps, herself, free from guilt? or is he not as great a reprobate as the woman who deliberately kills her child after it is born? To insure an honest and punctilious compliance with such a requirement, our State legislatures should enact special laws, the non-observance of which should be punished by fine and imprisonment. Such laws, by operating upon the fears of the libertine and the innocent victim of sexual immorality, could not fail to be productive of beneficial results by diminishing, to a very great extent, abortions and miscarriages, and the premature destruction of children born at the full term.

We boast of the rapid increase of our population, and of the general diffusion of knowledge, but we seem to forget that the glory and prosperity of a nation consist not in the number, but in the character of its people. In proportion as a nation deteriorates in its physical and mental powers, are its degradation, and the danger of its ultimate downfall. When Rome was the

mistress of the world, her men and women were noble specimens of humanity; and it was not until after the introduction of all kinds of luxury, immorality, debauchery, and crime, that her glory fairly began to decline, and eventually culminated in utter debasement and ruin. How far the syphilitic poison, combined with the degrading arts of the shop-keeper, affected the results of the late war of the French people with their German neighbors, would be an interesting question for the solution of the physiologist, the philosopher, and the statesman. "Of all the arts," as has been happily observed by an ingenious writer and thinker, "the grandest is the art of forming noble specimens of humanity." It is devoutly to be wished that all men infected with the seeds of the syphilitic virus, and of the so-called scrofulous maladies, especially pulmonary phthisis, should either altogether refrain from matrimony, or wed only strong and vigorous women. Pains should be taken to instruct young men in our colleges and seminaries of learning, in regard to the dangers of promiscuous sexual intercourse; and, indeed, it would be well if the same kind act were extended to all large bodies of men, wherever or for whatever purposes congregated. Nor should it be forgotten that private prostitution is often quite as dangerous as public. In Brussels, according to Professor Crocq, the risks seem even to be greater, since, under governmental regulations, public prostitution has been reduced almost to a nullity. The subject is one of deep interest to life insurance companies, and to every charitable citizen disposed to spend his means in the promotion of the public weal. Many of the inmates of our deaf and blind asylums are the descendants of syphilitic parents, who thus manufacture diseases and infirmities to be treated at the expense of public and private charities. Our hospitals are filled with persons affected with maladies dependent, directly or indirectly, upon syphilitic infection.

In bringing this discussion, carried far beyond the limits originally assigned to it, to a close, I beg you to accept my cordial acknowledgments for your courtesy in so attentively listen-

ing to me, and to be assured that, in what I have said, I have had no wish or desire to indulge in perilous assertions, or to make positive statements without supporting them, at least in some degree, with proof, derived from either direct personal observation, or from a careful examination of the literature of the Profession, illuminated by the labors of men, who, like myself, have eyes to see, and the light of experience to guide them. My sole aim has been to be truthful, and to interpret the facts presented here to-day, as I comprehend them, and as I discern their importance. The path is not a new one; other men have walked along its slippery surface, and have shown the world that they were not afraid to encounter its perils. If, in what I have said, it has been my good fortune to awaken in your minds an earnest desire to prosecute the study of the question, and to aid me in directing to its importance the attention of the Profession and of the people of the United States, so jealous of the national honor and glory, my highest ambition will be satisfied.

Prejudice is a powerful obstacle to success in any great, difficult, or novel enterprise; and it is only by associated effort, and by undaunted perseverance that anything within the limits of human reason and ingenuity is eventually brought to a triumphant issue. The age of miracles is passed. The sun no longer revolves around the earth; the belief in witchcraft has ceased to become a crime; a man's books are no longer burned by the hangman; the inquisition has been abolished; and although the world is still infected with numerous superstitions and follies, many, many things, considered at one time as impossible, are in successful operation, lightening the burdens of labor, extending the boundaries of civilization and Christanity, and bringing us daily into more close and intimate relations with the great Architect of the Universe.*—*Transactions.*

* I had hoped to be able to incorporate in this discourse some of the material which, through the kindness of Surgeon General Barnes, U. S. A., has been communicated to me by nearly thirty army surgeons stationed at our frontier

ART. II.—ON EXCISION OF CANCER OF THE BREAST BY SCISSOR-CUTTING UNDER ETHER SPRAY. By BENJAMIN W. RICHARDSON, M. D., F. R. S.

At this moment, when the dangers of general anæsthesia are so anxiously felt by the Profession, the following clinical facts may prove of value:

A lady, fifty-five years of age, consulted me in April last respecting a tumor in the left breast. The tumor had been present, and had at times been painful, for a considerable period, but, as it remained of small size, she did not consider it of importance until this year, when it began steadily to increase in size. The nature of the tumor was sufficiently clear. It was a hard scirrhus, of the size of a small hen's egg, loosely held in the gland, with no adhesions to the muscular structure beneath. The family history of the patient confirmed the diagnosis: her mother had suffered from scirrhus of the breast. The diagnosis left no doubt respecting the proper mode of treatment. There could be no hesitation in advising that the abnormal growth, while it was yet easily movable and removable, should be excised, and to this advice the patient gave a willing assent.

But now the question of the administration of an anæsthetic came under consideration. The action of the heart of this lady was so intermittent and irregular, and the power of her heart was so reduced, that the slightest external impression influenced it in its motion. She belonged, in a word, to that population which is prone to die suddenly from chloroform and the other narcotic vapors.

Under these circumstances I proposed to the patient that the

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settlements, concerning the prevalence of syphilis and scrofula among our principal Indian tribes; but the statements are so discordant as to render it difficult, if not impossible, to deduce from them any satisfactory conclusions. For this reason, they will be withheld until further light is thrown upon the inquiry. Meanwhile I herewith tender to the gentlemen who have been so kind as to respond to my wishes my cordial acknowledgments.

tumor should be excised under local anæsthesia; and, that the failure of the process, if failure should follow the recommendation, might fall upon me entirely, if I performed the operation myself.

I operated on the 8th May last, in the following manner: The patient having been placed in a semi-recumbent position on a narrow couch, I directed Mr. W. Perkins, who very efficiently conducted the local anæsthesia, to direct gently over the tumor a large spray of common ether, so as to chill thoroughly but not to freeze the skin. I let him maintain this for a period of five minutes. Then I handed him another tube and bottle for spraying over the already chilled part the light fluid called anæsthetic ether—a compound of ether of sp. gr. .720 with hydride of amyl. A few moments' application of this lighter ether was sufficient to render the whole of the breast frozen like a hard snowball. For a minute longer, that the deeper structures might become equally chilled, the spray was continued. When the structures were thus prepared, instead of using a scalpel for cutting, as in the ordinary way, I made the required incisions through the skin with a pair of strong, sharp, slightly-curved scissors. Commencing the incision by an angular cut at the outer margin of the part to be excised, I carried the lower blade of the scissors deeply into the breast with the edge of the blade everted. In this way I cut the lower flap; then, commencing at the same angle, I cut in the same manner the upper flap. The rapidity and ease with which these incisions through the hardened tissues were made struck me most favorably. The incisions were deep enough to enable me to grasp the tumor firmly with the left hand. I now laid down the ordinary sharp-cutting scissors, and with a pair of strong, slightly-curved, tooth-edged scissors, I proceeded to cut on each side of the tumor until I could fairly lift it up; then, by a few strokes made with the scissors underneath, I cleared it completely away. The operation lasted precisely three minutes, and was unattended, during the whole time, by the escape of blood. The diseased mass removed, I had the ether-spray

withdrawn, in order to see if any vessels would bleed during reäction from the freezing. There was a little oozing of blood, which quickly subsided, and one artery was tied, both ends of the ligature being cut off close to the vessel. The wound, carefully cleaned with a soft, damp sponge, was closed; the edges of it were secured with five sutures; a pledget of cotton-wool, charged with styptic colloid, was placed over the wound; and a lint-pad and firm bandage completed the dressing. The patient passed a good night after the operation. She was allowed to rise and go into the drawing-room on the following day; and as she exhibited no rise of temperature beyond 99° Fahr., and only for a few hours, and suffered from not one untoward symptom, the dressing was left untouched until the 13th of May, when, on removing it, the wound was found healed throughout its entire extent. The sutures were removed a few days later, when the line of incision was found fairly closed, without a particle of discharge or interruption of healing at any point.

During the whole of the operation the patient did not utter a single expression of pain, and I may here add her description of what she felt of the operation. The description was taken down by Dr. Platt, who rendered me his most able assistance, from the patient, immediately after the operation, and it is repeated in her own words: "During the application of the ether-spray the local feeling was that of gradually becoming cold, as in frosty weather, just as when the hands go numb, but there was no actual pain. Felt pressure when the scissors went into the tumor, and experienced a kind of jar, but did not feel anything like an incision, and, in fact, was not aware when the incisions were made. Felt nothing of the next part of the operation, but when the tumor was held up and divided by three long cuts, experienced a feeling, not of pain, but as if the parts were put on the stretch or dragged; did not feel the tying of the ligature, but when some small substance (a bit of loose fatty tissue) was cut off felt again as if the parts were being stretched. When the sutures were introduced felt the pressure

while the flaps were being held together, but was unconscious of the prick of the needle."

In all respects this operation was, as an operation, completely successful, and one other success followed it I did not expect. As the recovery from the excision progressed, the irregular action of the heart became less marked, and ultimately disappeared altogether. In the month of July this lady called upon me, and was found to be restored to perfect health.

Soon after the recovery of the patient above named, another lady came under my care, who was suffering from a scirrhus tumor, situated a little above the right breast, towards the axilla. This tumor, as a small mass about the size of a hazel-nut, had been present for several years without undergoing change, but recently, upon the occurrence of a slight blow from a fall, it had commenced rapidly to increase in size. It was now a firm and well-defined scirrhus of the size of a pullet's egg; it moved with moderate freedom beneath the skin, but not without conveying a suspicion which afterwards proved to be correct, that it was attached to the pectoral muscle. Over the centre of the tumor there was retraction of the skin, and the nipple was slightly retracted towards it. The glands in the axilla were free.

The diagnosis in this instance was sufficiently clear, and the practice of immediate removal of the tumor seemed to me positive. But again the question of the administration of chloroform or of some other anæsthetic vapor pressed for careful consideration. The patient had been declared by one of her medical friends to be suffering from disease of the heart, and had been urged by him in the most forcible terms not to subject herself to general anæsthesia. Another medical friend, in less determinate but still serious expression of opinion, gave her similar advice. She herself had read of the danger she heard described, and her anxious dread alone was all but sufficient to preclude the administration of any narcotic vapor. On examination of the heart I found an exceeding feebleness of action, an irregular and often intermittent beat, and at the apex a soft

systolic murmur. I suggested, under these circumstances, the removal of the scirrhus tumor under ether spray, and on June 23, again very ably assisted by Dr. Platt, I performed the operation. The steps of the operation were much the same as those described in the previous history. For a few minutes an ether of a specific gravity of 1035 was sprayed over the breast, then the light anæsthetic ether was used until all the part was completely solidified. This condition attained, I made the incisions with sharp-cutting scissors, separated the tumor by a few lateral divisions with the same scissors, and then raising it, cut it out from its deep connections by means of the curved tooth-edged cutting scissors. The growth in this instance was firmly attached to the pectoral muscle over the space the size of a florin, but I found no greater difficulty than a little delay in separating it, together with a layer of connective tissue, from its attachment.

So far the operation was actually bloodless. I waited a brief period, before closing the wound, for perfect reäction to occur and for observing if there was any hæmorrhage. With the reäction one small artery yielded blood, but the bleeding was instantly and effectually stopped by torsion. The edges of the wound were brought together with five silk sutures, and the styptic colloid dressing, with cotton-wool, a soft pad and bandage, was applied.

This patient, like the last, bore the operation perfectly. She felt no pain from the incisions, and although the deep dissection which was required to remove the tumor from its attachment was felt as a severe drag or pull, it gave rise to no evidence of acute pain. The act of sponging the wound, and the insertion of one of the sutures, caused momentary expression of pain; but, on the whole, she was throughout brave, perfectly collected, and as quiet as if she had been asleep. This patient, like the previous one, progressed so favorably that she was allowed to get up every day. On the fourth day after the operation, as she complained of the pressure of the pad, I removed the dressing, and found the wound freshly healed

throughout its entire length, without a trace of suppuration. In this act, however, a little misfortune occurred. A portion of the cotton-wool adhered firmly, through the styptic colloid, to a loose end of the upper suture, and, while I was extricating the wool, an accidental movement of the patient caused the ligature to tear out of the upper lip of the newly-joined skin. From this slight point there flowed as much as a drachm and a half to two drachms of bright-red very thin blood. I stopped the bleeding, not very readily, by firm pressure with styptic wool; but a little further bleeding took place during the day beneath the compress and into the subcutaneous tissue, and gave rise to a superficial sore about the size of a sixpence. On the eighth day after the operation the patient was able to go out of doors, and, but for the slow healing of the small sore whence the hæmorrhage proceeded at the first dressing of the wound, recovery rapidly succeeded.

One other fact closely connecting this with the preceding case is worthy of particular notice. As this second patient began to rally from the operation, the distressing cardiac symptoms entirely passed away, the stroke of the heart improved in tone, the irritability ceased, and the faint murmur became imperceptible.

NOTES.

The facts recorded call for one or two brief comments.

The Effect of the Local Anæsthesia.—It is certain that in both these cases the local method afforded everything that could be desired in the way of anæsthesia. It saved all acute pain; it saved the patient the dread of death during the insensibility from a general anæsthetic, and it enabled me to proceed in my task without a thought as to the immediate safety of the patient. I may say more for it still. It warranted me in recommending the operation. I should certainly not have advised any friend of mine, whose heart was in the same condition of irritability and irregular nervous supply, to inhale an anæsthetic vapor to the fatal effects of which such conditions of the circulation are so favorable. Applying then this same

rule to a patient, who, in putting his life into my hands, makes his for the time mine, I should consider it actually wrong to recommend a risk I would not myself accept. But, taking advantage of the local method, I had no occasion to suggest a danger of any kind, while I secured my patients the benefits of anæsthesia. I saved them the dread of death from the effects of a general anæsthetic; I saved them possibly the symptoms of after-vomiting and faintness; and I saved myself and my colleagues during the operation the anxiety that ever attends the administration of a general anæsthetic to persons in whom disease of the heart is foreknown.

The Method of Cutting with Scissors.—Local anæsthesia has many disadvantages. It is more troublesome than general anesthesia as a detail of practice, and, as it leaves the consciousness alive, it fails at times in preventing the fears of the patient. But hitherto the greatest difficulty in operating under it has been the obstacle of cutting through the hard, frozen, insensible part. The resistance to incision by the best cutting knife, and especially to dissection by the knife, is such that I have seen the most skillful surgeons troubled by it; and I have never been able to complain of the objection that has been made to the method, on this ground. The difficulty is now overcome by the process of scissor-cutting which I have here introduced. The advantage of the scissors over the scalpel will be at once proved by any one who will take a thick, firm structure—the cover of a book for example—and try to cut through it. With the best of scalpels he will be troubled; but with scissor-blades he will cut with the utmost facility, if the blades be well set. So in cutting through the frozen animal tissue, the parts can be divided as rapidly as may be desired. The cutting is also made without any downward pressure, by which pain of pressure is saved. Also in deep dissection, the tissues, frozen as they are exposed, can be divided more easily than by the knife; for the harder they are solidified, the easier they are divided by the scissor-blades. In a word, I believe that every cutting operation, in which local anæsthesia is practicable, may

be performed neatly and effectively by scissor-cutting, and that a much larger number of operations may now be painlessly carried out under the local method.

Some little attention requires to be paid to the instruments used. The scissors for superficial or skin-cutting should be exquisitely sharp, neat and strong; and I prefer them slightly curved. For deep cutting, where there are many blood vessels, the tooth-edged cutters are valuable. These pierce, crush, and divide at the same time, and they save blood. For other purposes, as for division of a sinus, some modifications are required, and Messrs. Krohne and Sesemann are now making for me a case instruments for the special purpose of operation on the method under consideration.

Effect of the Operation on the Heart in the Cases Related.—No fact is more instructive in the history of the patients recorded in this paper than the beneficial effect produced on the functions of the heart by the operation. In both instances the cardiac irregularity and irritability were purely due to irregular nervous supply; to nervous irritation and consequent muscular exhaustion. The irritation might have been in part due to the mental anxiety which naturally accompanies the disease, or it might have been due to irritation of the tumor, and have been reflex in character. Whichever view be correct, the result of the operation was curative, and, as the cases are typical of a class of phenomena of disease, the lesson they teach is extended far beyond them as individual illustrations. They show that so soon as the heart obtains rest from the persistent nervous thrill that invades it, its muscular tone returns, and its irregular motion and excitability cease. Thus by operating early for the removal of cancer the surgeon acts as physician also, and prolongs the general life by removing the local disease. I am convinced that I have seen patients suffering of cancer die from mental and local irritation of the disease, long before any development of the malady has advanced to kill by destruction of the part or organ involved. I infer, therefore, that if, without danger to life from general anæsthesia, we can remove exter-

nal malignant growths painlessly and promptly, so soon indeed as they are detected, we shall bring art, effectively, to the defeat even of cancer.—*Lancet.*

ART. III.—EUCALYPTUS GLOBULUS. By T. B. TALBOT, M. D., Sidney, Ohio.

Having seen but little written on the action of eucalyptus globulus in the treatment of remittent and intermittent fevers, I thought I would give you the history of a few cases that I had been trying it in, in the last few months, for the benefit of your readers that have not had any experience in the use of it. The following is a brief history of the cases:

Mrs. V., aged thirty-eight, a farmer's wife, very much emaciated, has been suffering from intermittent fever for several months, which had assumed the double quotidian type. For the last ten days she was not able to be out of bed. The paroxysms came on regularly at 7 A. M. and 10 P. M., and were accompanied with very slight chilly sensation and some coldness of the feet, followed by very high fever and profuse perspiration. I gave her a very large dose of quinine without any effect; also gave arsenite of potash with the same result. I then gave gtts. lx of fl. ext. eucalyptus every hour and a half, commencing in the sweating stage and continuing it until the time for the next paroxysm. She did not have any return of the attacks, and has continued well ever since.

Mr. P., aged 26, German, baker, had been treated for remittent fever for eight days by my friend Dr. B., of this place, and he had been giving him very large doses of quinine without interrupting the paroxysms. He became dissatisfied and sent for me. I gave him gtts. lx every hour and a half, of fl. ext. eucalyptus, commencing during the sweating stage and continuing until he had six doses. He had no more fever, and commenced his usual occupation in a few days.

Mr. and Mrs. S., middle-aged, moved to this place from Port Jefferson, both suffering with intermittent fever. He had been laboring under the quartan type for eight months, and she had been troubled with the quotidian type for the last two years, more or less, and had had it for the last six weeks regularly. She was pregnant, seven months advanced, anæmic, with a sallow complexion, spleen very much enlarged, reaching about four inches below the free margin of the ribs. Before trying the eucalyptus, I gave gr. xx of quinia, in the sweating stage, without any effect in either case. I then opened the bowels in both cases with hydrarg. chlor. mit., and followed it with the usual doses of eucalyptus; there has been no return of the disease in either case.

These experiments, although confined to a small number of cases, seem to show that there are some cases in which quinine proves inefficacious. In such cases it is important to possess a remedy that will answer. And I believe that eucalyptus possesses that power. And besides, it does not cause those distressing head troubles that belong to quinia, and it is not nearly so disagreeable to the taste.—*Clinic.*

ART. IV.—THE INTERNAL ADMINISTRATION OF ABSOLUTE ALCOHOL.

Mr. John C. Lucas, L. R. C. S. E., writes to the London "Medical Times and Gazette": "The internal use of alcohol in the anhydrous form, or as rectified spirit, has hitherto been unknown in therapeutical literature. Rectified spirit, as we are aware, contains eighty-four per cent. of absolute anhydrous alcohol; it enters into the preparation of most of our tinctures and is largely employed for external purposes. But when given internally in properly regulated doses, it should always be freely diluted and properly disguised by peppermint, and perhaps colored with lavender, not only to conceal its disagreeable taste,

but also to prevent the patient from knowing that he or she is taking alcohol, the dose being adjusted in accordance with the demand of each individual case. The advantages gained in this method of administration are great over ordering brandy, etc.

As a portion of nourishment, in cases where we have hitherto employed the latter for virtues possessed by the former, without the evils and uncertainty attending the usual mode of administering alcoholic stimulant, I shall briefly state the objections to ordering brandy, gin, etc.

First and foremost, the quantity of the brandy, etc., plays the most important part, especially as it is our main object to regulate the quantity of alcohol taken by our patient, not to speak of the impurities in adulterations, so that if we prescribe in the form mentioned above we are positive as to the quantity, and that our patient does not have the noxious ingredients contained in bad brandy, gin, etc.; the former, when good, ought to contain a little more than half its weight of alcohol. Secondly, when it is dispensed and labeled in the ordinary way as medicine, the friends of the patient and nurses are more likely to give it at specified and regular intervals, as directed by the practitioner, than if brandy, etc., were ordered in the form of nourishment. Thirdly, the patient, if conscious, takes medicine more readily than food. Fourthly, and lastly, we know that in lower class patients the friends who nurse the sick are too often tempted to help themselves out of the stock which ought to be consumed by the patient. Unfortunately, this evil we sometimes, though rarely, witness in hospital practice, where the nurse, addicted to drink, robs the sick of the important alcoholic portion of nourishment. Of course, this is never expected nor seen in tolerably good-class practice, nor in well-governed institutions.

In the few cases in which I have adopted this method (originally inculcated by Prof. Parkes, of Netley), I have found every good derived. The stimulating effect, when desired, seemed to me more marked, more rapid and more lasting than when an equivalent of brandy (good) was allowed. If we

watch the patient after he has taken three drachms of absolute alcohol, an amount equivalent to six drachms of brandy, we notice almost immediately the pulse becoming stronger, and the limbs, which may have been previously cold, become warmer. The patients themselves have told me that they felt revived, almost immediately after swallowing it. But given in larger doses (even two drachms) it produces a pulsating sensation in the limbs, felt by the patient himself.—*Med. and Surg. Rep.*

ANALYTICAL DEPARTMENT.

"Qui e nuce nucleum esse vult, frangit nucem."—PLAUTUS.

Medicine Correcting History.—There is perhaps no fallacy which has been so generally embodied in history, and so generally believed to be the truth, as that which represents Alexander the Great as having, "after conquering the world, died disgracefully of a debauch." It is a pleasant fact to record that medicine has in its records, as given by Sir Henry Halford, Baronet, M. D., G. C. H., in 1833, removed this inexcusable libel and cruel aspersion.

This distinguished physician and classical scholar, in one of his beautiful essays read before the Royal College of Physicians nearly fifty years ago, thus writes:—ED.

"Alexander died, in fact, of *a remittent fever*, which he had caught in the marshes of Babylon. He had resolved to make that mother of cities and cradle of civilization the capital of his great eastern empire, and occupied himself, amongst other important objects, with diverting the channel of the Euphrates, and draining some enormous lakes which the river had left from time to time by overflowing its banks. He superintended these operations himself, and began to complain of fever on the day which he had set apart for offering a splendid sacrifice for the success of his intended expedition to Arabia.

After the banquet, he was prevailed upon to spend the evening with Medius, one of his favorites, where he remained until after midnight, not, however, to commit any excess, but for the pleasure of social intercourse, for Arrian says expressly,* that in the pleasures of the table he was temperate, not to say abstinent. The fever had now established itself in his frame, and the extraordinary fatigues which he had undergone; the exposure within the last three years to the rains of the Punjab; the burning sands of Gedrosia, and the frost and snow of Mount Zagrus, and lastly to the marsh miasmata of the Babylonian lakes, leave us but little cause for surprise, that all proved at length too much for even his frame of adamant to bear. He died about the twelfth day. No physician is mentioned, but we conjecture from the bulletins that the King's dependence for recovery was upon abstinence and bathing. The bulletins are given, both by Arrian and Plutarch, the latter taking them from the diary of the Royal Secretary, Eumenes, famous afterward for his struggle for power with others of Alexander's generals.

"*On the First Day.*—It is stated that he drank in festive company with Medius; on rising bathed, and then went to rest.

"*Second Day.*—After bathing, he returned to his bed-chamber, bathed again late in the evening, then after supper he made the accustomed offerings to God; and had fever through the night.

"*Third Day.*—Having bathed, he performed the usual duties of the sacrifice, and passed the day in the bathing-hall, giving orders to commanders for the march of the army and the sailing of the fleet. He was then carried on a couch to the river, which he crossed in a boat to a summer-house, where again he bathed and passed the night.

"*Fourth Day.*—He bathed and sacrificed as the law required. In the evening he took a light supper, and being carried to his

* Vide Arrian de Expedit. Alexander, lib. 7. Sub finem.

bed-chamber, the fever increased, and he passed a very bad night.

"*Fifth Day.*—His fever being violent, he was carried to the great swimming bath, and lying by it, he conversed with the generals about some persons fit to be appointed to vacant commands.

"*Sixth Day.*—He performed again his religious ceremonies, and although there was no intermission of the fever, he would see the generals, and give orders about the expedition.

"On the following day, it was not without difficulty that he was carried to the altar to make the sacrifice. Nevertheless, he would see the officers and give his commands.

"On the eighth, although extremely ill, he made the accustomed sacred offerings, and ordered the generals to remain assembled in the court. He was carried from the summer-house in the park to the palace. When the generals entered he knew them, but said nothing. His fever was very violent during the night.

"On the ninth it was equally violent; on the tenth the same. This day the army became impatient to see the King, upon which they were permitted to enter his chamber in small parties. The King looked at them steadfastly, but did not speak.

"The next day the King died.

"I wish I could, without too severe a demand on your time, add to this detail of Alexander's sickness, which vindicates his memory from the disgraceful imputation too lightly cast upon him of habitual intemperance, and especially from the reproach of owing his death to a drunken debauch; I wish, I say, I could, without being tedious, add to this detail Arrian's beautiful portraiture of the character of that great man, whose spirit and energy, manifested in the conquest of so large an extent of country, was fully equaled by his wisdom in controlling and attaching to his government the nations which he had subdued. Of the merit of his system of policy of intermarrying his wounded soldiers with the females of the conquered countries, and of appointing Macedonian officers to command the native

troops, what stronger proofs can be given, than that the experience of more than two thousand years has added nothing to what his instinctive discernment had already suggested to him. That his successors were taught, by what he had done, to found and to govern kingdoms; and that the efficiency of the British army in India, to keep in subjection nearly one hundred millions of the inhabitants of that vast country, is at this day maintained by the very same measures which Alexander devised and carried into execution.—*Sir Henry Halford's Essays.*"

CLINICAL RECORDS.

"Ex principiis, nascitur probabilitas: ex factis, vero veritas."

ART. I.—REMARKABLE CASE—BLOODY SWEAT. By W. P. HART, M. D., Washington, Ark.

To Dr. M. C. Boyse, the attending physician, I am indebted for the history of this case up to the night of November 5th, when I was called in consultation.

Mr. Ira T. Griffin, a young unmarried man, 24 or 25 years of age, raised at this place, of good constitution, of good moral character, sober, rarely if ever indulging in dissipation; set in to learn the painter's business three or four years since, which occupation he continued to follow up to a short time before he was taken sick; went to Dr. Boyse's office on Saturday, October 31st, 1874, to get some medicine, when he stated that he had not been feeling well for some considerable time past; had been feeling stupid and drowsy, with rigors and chilly sensations and feverish symptoms; complained of severe pain in the head and back, and in the region of the loins, stomach and spleen. Upon examination, the three last mentioned organs were found to be enlarged and tender, especially the stomach, which was very much swollen and tender under pressure. Ordered calomel, grs. xv., and Dover's powder, grs. x., to be

taken at bedtime and followed with epsom salts in the morning, if the calomel has not acted. The salts acted freely, and he took laudanum late in the evening to check the bowels. During the day, Monday, Nov. 2d, he was nauseated and vomited, and was ordered Monday night, sulphate morphia, gr. ½, and subnitrate bismuth, grs. x., to be repeated in two hours if necessary; rested well that night under the influence of the first potion, and Tuesday part of the day. Went in a vehicle to the polls and voted Tuesday evening, but complained of not being well, his face was swollen and flushed. Tuesday night Dr. Boyse visited him for the first time; found him sitting up in a chair asleep, and dressed. Pulse 110; face swollen and red; stupid and dull; complaining of chilly sensations and severe pain up and down the course of the spine; great thirst. Was informed by the family that he had been stupid and drowsy and sleeping in his chair for two or three days past. Ordered:

℞—Calomel;
Dover's Powder āā grs. x.

M. Divide in three powders.

S.—One every two hours. Also:

℞—Quiniæ Sulph. grs. xx.

M. Divide into three powders.

S.—One every three hours.

Also directed the whole course of the spine to be irritated with strong liniment.

Wednesday, November 4th, 7 A. M., patient's condition but little changed since last night's visit. Pulse 110; still sitting up in his chair sleeping, with his clothes and boots on. Ordered him to bed; no action from the bowels; same perscriptions continued, but the calomel and Dover's powder are given at intervals of four instead of two hours.

4½ P. M., patient's bowels have acted during the day three times; dark, bilious and consistent actions; no change in his symptoms worthy of remark.

Thursday, November 5th, 7½ A. M., stupid, listless and sleeping. Pulse 100, and respirations 4½ per minute; has had

three small bilious actions from the bowels during the night; complains of soreness and tenderness when pressed over the stomach and bowels; is nauseated and vomits occasionally. Ordered five drops turpentine in half an ounce saturated solution of chlorate potash every three hours.

1½ P. M., the ejections from the stomach, the actions from the bowels, the urine and the sputa, are all *bloody*, and the blood is oozing in a thousand points from the pores of the skin all over the body; it looks like bloody perspiration. The points of discharge are thickest over the body, but they are over the extremities and the face; his night clothes are as spotted with blood as if he had been bleeding from almost every pore of the skin, and the blood not only ran through his night clothes, but on to the bed clothes, some of the stains being as large as a quarter of a dollar, and one or two of them as large as a Mexican dollar. Complains of a distressing itching over the body; no discoloration of the skin when the blood is removed, but it is rather unnaturally white and clear over the body and extremities, but his face is flushed, and the vessels of the face and neck are filled and turgid. The prescription of the morning is continued, and ordered that the whole body be anointed with equal portions of turpentine and lard, the counter-irritation over the spine repeated, and cold to the head and warmth to the feet.

On Friday morning, November 6, 3 A. M., I was called by Dr. Boyse to see the case with him. The patient is stupid and and drowsy, and sleepy and listless, will go to sleep while you are talking with him, but is conscious and rational when fully aroused. Complains of nothing except a little oppression about the chest. Pulse 100, and respiration 5¼ per minute, deep, and full. Thermometer not used, but there is not much heat of skin, no perspiration, no rigors nor chilliness, nor any evidences of periodicity; no discoloration of the skin, only from the bleeding; tongue not much coated, but too large and flabby, and of a livid appearance; but little cough; auscultation evidences considerable effusion about the right lung. What he

spits from the lungs and throws up from the stomach, as well as the actions from the bowels and kidneys, are all bloody. The hæmorrhage from the surface has checked since the application of the turpentine. There is considerable twitching and subsultus. Continued the application of turpentine and lard to the surface, and the turpentine emulsion with the saturated solution of the chlorate potassa internally; also twenty drops tinct. ferri chloridi every two hours, and twenty grains brom. potassium as often as necessity may require to quiet nervousness. He has no appetite, but little thirst.

8 o'clock A. M.—Condition of the patient but little changed since 3 o'clock. Pulse 100; respiration 4 per minute; temperature, under the tongue, 100° F.; one small evacuation from the bowels and kidneys each; shows but little traces of blood, none from the surface; but little swelling or soreness about any of the abdominal viscera. He has no desire for nourishment. Same treatment continued.

1 P. M.—Pulse 96; respiration 6 per minute; temperature 100° F.; stupor not quite so great, yet he will go to sleep while talking; no hæmorrhage from the skin; has not vomited since morning; coughs occasionally, and the sputa are tinged with blood; has had two actions from the bowels intermixed with specks of blood; kidneys acting sparsely, and only when the bowels move. Have not tested the urine. The breath is very offensive, and the odor from the actions of the bowels almost intolerable; skin still white and clear; considerable nervousness and twitching. Ate a soft egg at 9 o'clock and a tender chicken leg at 12 o'clock. Treatment continued without change.

5 P. M.—Pulse 100; respiration 5 per minute; temperature 100° F.; skin pleasant and soft; stupor rather increasing; hard to keep him awake long enough to examine him; incoherent; sensibility is partially destroyed, and he is not conscious of his condition; no complaint, except the annoying itching of the skin, which keeps him scratching constantly when awake. The nurse is instructed to arouse him frequently, as he breathes two

or three times faster per minute when awake than when sleeping. There is some soreness about the middle lobe of the right lung, and the sputa are of a mahogany or brickdust color. Vomited twice since last visit, and threw up what he had eaten, together with some bilious matter, but no blood. The bowels have acted twice and the kidneys once; some thirst; has taken about two ounces of buttermilk. The action of the heart is labored and tumultuous, the first sound being quite loud; the radial pulse is weak but regular. Ordered the external application of turpentine and lard repeated to relieve the itching (he calls for it himself), and a continuation of the same internal remedies.

Saturday, November 7, 8 A. M.—Pulse 96; respiration 4½ per minute; temperature 98½° F. A very marked and peculiar churning sound about the heart's action; mouth and teeth dry, and sordes beginning to form; stupor deepening and nervous symptoms increasing; vomited once during the night, and the bowels acted once; the discharge is colored black from the effects of the iron he is taking; kidneys have not acted for eighteen hours, bladder filled; gets up and passes about three half pints of urine, which is turbid and milky; tested by nitric acid and heat, shows a great quantity of albumen. No discharge of blood from any organ, except a few points on the mucous surface of the lower lip. Has taken no nourishment, but little water. Stopped former treatment and substituted three grains sulph. quinia and one-fiftieth grain strychnia every three hours, alternated with two drachms of brandy in a little lemonade.

10 A. M.—Have just been called to patient, and found the fingers and toes cool, the pulse more feeble and stupor deepening, otherwise his condition not materially altered. In addition to the morning prescription, ordered friction over the extremities with dry mustard, and hot rocks to the feet, increased the quantity of brandy by giving it every one and a half hours. The pulse is faster when sleeping by eight beats per minute than when awake, and the respiration slower by one per minute when sleeping than when aroused.

5 P. M.—Reäction came on by 1 o'clock, and there is now considerable excitement. Pulse 110, firm, and full; respiration 6 per minute; temperature 101° F. Passed about one pint of turbid urine; no action from the bowels. Lies in a semi-comatose state; when aroused he is listless and incoherent. The air enters the lungs well; the inspirations are long and deep; no abnormal sounds about the lungs worthy of note. Ordered, in addition to former prescription, half an ounce saturated solution of chlorate potassa every three hours.

Sunday, November 8, 8 A. M.—Nervous twitching and subsultus not so great; stupor about the same; face flushed, and the vessels of the face and neck full and distended; quite a number of pimples or elevations on the forehead resembling mosquito bites. The blood is oozing from the mucous surface of the lower lip at several points; the teeth, gums, and tongue dry, but the tongue is not so large and livid. Pulse 100, soft, regular, and of good volume; respiration 7 per minute; the air enters the lungs well; temperature 100° F.; skin soft and pleasant; has not vomited during the night; the bowels have acted three times, thin and watery, and colored with the iron; passed three or four pints of turbid-looking urine of a strong ammoniacal odor. Complains of nothing; and to the question, "How do you feel?" always replies, "I am better." He has no appetite, and but little thirst. Continued treatment of yesterday evening, and for nourishment, half an ounce of beef-tea to be given every three hours. Ordered the body to be anointed morning and evening with the turpentine and lard, with a few drops of carbolic acid added. He calls for the application to allay the itching of the skin.

5 P. M.—Slight increase of fever. Pulse 105; respiration 6 per minute; temperature 101° F. Has taken a little buttermilk and a soft egg in addition to the beef-tea. Vemited once; bowels and kidneys each have acted twice. Treatment of the morning continued.

Monday, November 9, 8 A. M.—Pulse 90, soft, and regular; respiration 5 per minute; temperature 100° F.; not so much

stupor; nervousness not so great. The abnormal sounds about the heart and lungs have disappeared; bowels and kidneys acting well; the urine is returning to its natural color. Bled half a pint from the arm, which has relieved the turgid vessels and flushed face. No muttering or delirium. Takes sufficient nourishment of light articles, such as soup, buttermilk, a soft egg, and beef-tea. Treatment not changed.

5 P. M.—Patient evidently appears to be better; stupor passing off; twitching and subsultus almost entirely relieved. Pulse 96, soft, and regular, and of good volume; respiration 8 per minute; temperature 100° F. Stomach a little irritable, but not much distension or soreness on pressure. During the day, one consistent, bilious action from the bowels. The kidneys are acting sufficiently, and the urine is almost natural in color. Has taken sufficient nourishment. Same treatment continued during the night.

Tuesday, November 10, 8 A. M.—Patient's condition not so encouraging as last evening. Pulse 94, small, and feeble; respiration 7 per minute; temperature 100° F. Stupor about the same; has vomited three times very hard, and throws up a dark, grumous matter, resembling decomposed blood; no secretion about the mouth, and he has considerable thirst. Has had two bloody actions from the bowels, but they are not swollen or tender under pressure; kidneys have acted twice freely and urine of good color; urine contains but little albumen. Stopped all treatment, and ordered the bowels to be moved with castor oil to rid them of decomposed blood or other substances that might act as poisons or irritants.

5 P. M.—Patient not so well; pulse more feeble, respiration and temperature not changed; bowels moved three times, the last action being much better than the first two; refuses nourishment; great thirst; cadaveric appearance about the face and extremities. Resumed the iron, quinine, and strychnine again at 1 o'clock, with as much brandy as he will take.

Wednesday, November 11, 8 A. M.—Patient not so stupid; pulse 96, volume small, and weak; respiration seven per min-

ute, not so deep and sighing; temperature 99° F.; face, gums, and lips blanched and anæmic; two small grumous ejections from the stomach; great thirst; three large bloody actions from the bowels; kidneys performing their functions very well; no fullness, hardness, or soreness about the bowels; considerable nervousness and subsultus. He is anxious and concerned about his condition; refuses all nourishment. Same treatment, with twenty-five drops Thayer's fluid extract ergot every three hours.

Thursday, November 12, 8 A. M.—Pulse 84, small and feeble; respiration 7 per minute; temperature 98° F.; stupor not so great; more easily aroused; extremities too cool; complains of weakness and prostration. The blanched anæmic appearance is more marked; stomach ejects every thing, even a swallow of water; hard, swollen, and tender. Two small bloody actions from the bowels, kidneys acting pretty well.

Stopped all treatment and ordered ⅛ gr. sulph. morphia to try and allay the irritation of the stomach, also a mustard plaster over the epigastric region.

5 P. M.—Patient has rested and expressed himself as feeling better. Has not vomited since he took the first potion of morphine, which has not increased the stupor, but he is more wakeful. Has taken more nourishment than during any day of his sickness, and has retained it. Pulse 96, respiration 8 per minute, temperature 100° F. He is taking milk punch, which he relishes; no medicine during the night.

Friday, November 13, 8 A. M.—Patient quiet, very little nervousness or stupor, rational; pulse 99, respiration 7 per minute, temperature 99° F.; vomited four times, ejections tinged with bile; bowels acted twice freely, mostly of decomposed blood; kidneys acting freely and of good color. The anæmic and œdemic appearance is more marked and he is growing weaker; refuses nourishment and complains of sick stomach. The mouth is very dry and the teeth coated with sordes; great thirst, but he can not retain water, brandy or

anything else without its nauseating him. Ordered a fly blister 4 by 6 inches over the stomach.

5 P. M.—No alteration in patient's condition worthy of note since morning visit.

Saturday, Nov. 4th, 8 A. M.—Patient is wakeful and talks rationally, and is conscious. Pulse 100, quite feeble and thready; respiration six per minute; temperature 96° F.; vomits occasionally; the blister has afforded but partial relief; bowels still passing disorganized blood; he is steadily declining under the drain from the stomach and bowels; refuses nourishment. Ordered tincture iron and brandy to be resumed if his stomach will tolerate them at all, also one eighth grain morphine occasionally to allay the nausea and vomiting.

5 P. M.—Condition not materially changed since morning.

Sunday, Nov. 15, 9 A. M.—Patient gradually but steadily declining; pulse 93, very feeble; respiration six per minute, deep and sighing; temperature 95° F.; constant nausea and vomiting; ejects but little except water; three dark, sanious actions from the bowels during the night. He looks as though his body was completely drained of blood, and presents the appearance more of statuary than a living being. The kidneys have ceased to secrete; vomits almost instantly everything taken into the stomach; stopped all efforts to administer medicine, except an occasional minute portion of morphine with a drop of creasote and a liltle brandy, to quiet as far as possible the great restlessness and jactitation.

5 P. M.—Patient failing and declining more rapidly, doubtless can't survive until morning. From this on he sank rapidly. His restlessness and suffering were intense until 4 A. M. of the 16th, at which time he expired.

We made application for the privilege of making a post-mortem examination, which was promptly and positively refused by the friends of the deceased.

I may be charged with having been tedious and prolix in the notes of this case, to which charge I plead guilty and enter my confession, and the only excuse I propose is the anomalous and

unique character of the case in some of its features, at least to Dr. B. and myself; and I desired to note the symptoms accurately and at frequent intervals, so as to give as correct a history as possible, even at the risk of repetition and prolixity. The notes were made from November 5th until his death immediately after examining the patient.

Dr. B. informs me that when he first came to his office for medicine, three or four days before he visited him, and at the time of his first visit, he was suffering quite much with nervousness and subsultus, and to relieve the symptoms, he prescribed bromide of potassium at the first visit made him. I had not learned the facts until I had written up the notes relating to the stage of the case.

The anomalous features in this case are the nervous symptoms and the uncontrollable sleepy disposition from the outset of the attack; the great lack of harmony in the action of the heart and lungs, from nearly the commencement of the case until death, and the hæmorrhage, which was general, even involving the cuticle of the entire body.

As stated in the outset, this patient was young and stout, of good constitution, had never abused himself, was moral and sober. True, he complained of not feeling well for some days, or perhaps a week or two, before he was taken to his bed, but was not so ill as to seek medical advice until October 31st. His symptoms were not those of miasm or malaria, so-called, the reputed *intangible, incomprehensible,* and *unknown* cause of so much sickness, suffering, and death. He was not, at the time of his sickening, nor had he been previously, residing in miasmatic districts; if there be such, *rightly* and *properly* so designated; for we have been peculiarly and unprecedentedly exempt from all types and characters of miasmatic diseases during the past summer and fall seasons.

Was his attack the result of lead poison, he having been engaged in learning the painter's business for three years past? If so, where were the constipation and colicky pains, prominent symptoms in lead poisoning? Again, why the lack of accord

and harmony in the action of the heart and lungs? Why the slowest respiration sometimes when the heart is most excited? What the cause and pathology of the hæmorrhage which pervaded, so far as our observation could extend, every tissue of the body? Erasmus Wilson treats of an affection which he denominates "bloody sweat," but that is usually a vicarious function and not applicable to this case. It is not purpura, because it shows itself on the extremities and those regions of the body possessed of the lowest vitality, and then the blood does not reach the surface, while in this case the blood was *actually discharged from the whole body*, and in sufficient quantities to stain the patient's night clothes and soil the bedding.

Possibly some one may say it was a case of blood poisoning. Very likely. But what poisoned the blood, and what will remove that poison and relieve the unfortunate victim?

To conclude this article, already too long, will you or some of your numerous readers diagnose the case and prescribe a treatment that will cure? for this case may be the harbinger of others yet to develop themselves, and we desire to be better armed and equipped, or we fear we will be vanquished as in the case of Ira T. Griffin.

ORIGINAL CORRESPONDENCE.

"Sit mihi Fas scribere audita."

New Canton, Va., December, 1874.

Dr. E. S. Gaillard:

Dear Sir,—Apropos of these latter days of bold and successful surgery, and particularly of that field opened by McDowell, of Kentucky, and since so ably cultivated by Atlee, Sims, and T. Gaillard Thomas, and now a host of others in America, daring deeds of ovariotomy and kindred operations are getting common. Yet it is presumed that any facts attest-

ing the impunity with which the peritoneum may be handled will not fail of interest to the Profession.

The late excellent pamphlet of Dr. Hunter Maguire, of Richmond, Va., upon "Gunshot and other Wounds of the Peritoneum," etc., has brought to my mind a case illustrative of his subject; but more especially bearing on the fact that inflammation of that important membrane is not so easily excited as was once supposed.

Case I.—J. T., a Welsh quarryman, aged about twenty-five years, of sound constitution, but somewhat "addicted to spirits," whilst in a state of intoxication, fell from a four-horse slate wagon, in rapid motion, and loaded with five or six other persons. The vehicle thus loaded, ran over him and across the middle of his body; it broke the neck off a large glass bottle, the stump of which, it seems, penetrated his abdomen, emptying his bowels, which were crushed into the sand by the rolling wheels.

May 29, 1869, I was called to see him; arrived just before sundown. The accident had occurred some hours before, and he had been carried to the comfortable home of a kind and hospitable neighbor. Found him lying on a bed with about a peck of small intestines and some omentum resting on the outside of his abdomen, and wrapped in wet cloths. Upon closer inspection, I ascertained that the entrails had escaped through a puncture made by the broken bottle (which he had in his pocket or bosom) when the wagon ran over him. The puncture was situated in the hypogastrium two and a half or three inches above the umbilicus, and in the middle line, penetrating the abdominal walls just between the bellies of the recti muscles. Neither the intestines nor omentum were cut or torn, but were sadly bruised, and had *a quantity of glass and grit ground into the peritoneal surface.* The surface of the whole mass appeared blackened and bruised; and, in striking contrast, shone the bright particles of glass and sand embedded therein. The vermicular motion was quite active, and presented a lively

scene by the light of the lamps brought to my aid. It was now getting dark.

With plenty of clear warm water and soft dry cloths, I set to work, first to remove the foreign substances, and then to return the bowels. But alas! how much easier said than done. By careful, patient washing and wiping, with the assistance of many willing hands, and as many sharp eyes, for more than two hours I washed, wiped and picked, gently as could be of course, but to the last, many, very many of those bright, glimmering specks twinkled at me still. Over, and over again I went until patience seemed no longer a virtue, since doctor, assistants, and patient had no more of it left. Clearly it was a *physical impossibility* to remove all this fine grit and glass. Let him who doubts this try a like experiment on some worthless brute. Or he may merely drop a piece of moist fresh meat in a pile of sand and broken glass—he need not grind it down with his heel—and then let him take his *own time* to clean it, but upon this condition, that he shall *eat* it when he is done. If he has any *teeth*, he will doubt no more.

In returning the bowels (last that came out, first to go back) which was easily accomplished, many particles were found, some quite large, which had previously escaped detection. Still, I *know* that *all* had not been, and could not be, removed.

After the reposition of this extruded mass, the aperture of their exit presented this appearance: The opening in the skin looked somewhat jagged, but was vertically made; the muscular tissue, excepting the fibres of the transversalis and oblique, were pretty clearly divided, or simply pushed aside. So there was no difficulty in bringing the lips in apposition; which done (by the assistance of Dr. A. H. Harris, of Gravel Hill, who had now arrived,) I secured the opening with two or three interrupted sutures passed through the thickness of the walls, the cut being barely two or two and a half inches long. These were supported by adhesive strips placed transversely, and the whole covered by cold water dressing.

The after-treatment was simply this: We enjoined absolute

quiet, and insured it by full doses of opium. He was allowed none but mild liquid diet—mostly fresh buttermilk; bowels kept entirely at rest by opium; and cold water was assiduously applied. This plan was rigidly followed for nearly a week. At the end of this time we concluded that all danger from inflammation was about over, and gave a dose of castor oil; after which opium was discontinued, and his diet gradually improved. The external wound was soon healed (in eight or ten days) and the man recovered without a bad symptom.

It is believed that few persons, professional or not, who could have seen the situation up to the closing of that wound, would have hoped for half so much. The man is still alive, or was six months ago; has never been sick or incommoded since he got up to walk, now more than four years ago.

Query.—What has become of that glass and sand? Escape was impossible. Absorption out of the question. Could it have been encysted? Respectfully,

A. W. Fontaine, M. D.

PROCEEDINGS OF SOCIETIES.

"Etsi non prosunt singula, juncta juvant."

Report of a Case of Thermic Fever—Death occurring during Convalescence from Gastric and Peritoneal Inflammation brought on by Imprudence in Diet, and Exposure to Cold. By George T. Erwin, M. D., Danville, Ky. [Read before the Boyle County Medical Society Sept. 21, 1874.]

On the morning of August 12, 1874, between 9 and 10 o'clock, while passing in the neighborhood of a flour mill, I was hastily summoned to see Mr. L—, whom I found lying in the mill-yard surrounded by the mill hands, who were chafing and rubbing his arms and breast, and applying cold water freely at the same time. His face was blanched, surface cold, pulse very

feeble, but he was quite rational. He told me he had been repairing some of the machinery of the mill, and had started to get a drink of water, but remembered no more until he saw me; that he had been ill the night before with diarrhœa, and was then suffering some pain in his bowels. The mercury on that day and the day preceding had stood at 99° and 100°. I injected—by estimate—¼ grain of morphia subcutaneously, and after a few moments, much against his wishes, had him carried into the mill and made as comfortable as possible, and then gave him some whisky. I remained with him until he became quiet and easy, and told him he must be conveyed home as soon as possible. He insisted that he would "get over it in a few moments," and resume his work. His son coming in just then, joined me in urging his father to go home, saying he would get a buggy for that purpose, which Mr. L— finally concluded to do, and I left with that understanding. At 1 P. M. I was again sent for in haste, just as I had started to visit him at his home—and found him, greatly to my surprise, still at the mill, pretty much in the same condition as when I first saw him, except that he had vomited once, and there had been applied in the meantime sinapisms to the extremities, by his wife, who had recently arrived, and that he had had some more whisky. I gave him another injection of morphia, hypodermic, about ¼ grain, made him swallow a whisky toddy, and after a while had him sent home—some four squares off—in a carriage. He had resisted all the entreaties of his wife and friends to be moved, always meeting them with the request for a little more rest and time, and it was only when I peremptorily ordered him to go home that he yielded. Upon reaching his home, I had him placed in bed, covered with blankets, with hot bricks to his feet. He soon expressed himself as feeling perfectly comfortable, and said he wanted to sleep. I examined his pulse, surface and pupils, but detected no indications of the profound collapse that was so soon to follow. Indeed, all I thought he needed just then was sleep and rest. His wife, however, laboring under great alarm and consternation, asked

to have another physician, to which I cheerfully assented, and Dr. Cowan was sent for. She had told me in the meantime of her husband's diarrhœa during the preceding night, and that she had urged him not to go to work that day, that he treated it lightly, and carried off with him a bottle of Jamaica Ginger, after taking a portion at home. She furthermore stated that he had had a diarrhœa for several weeks, which had reduced him considerably in health, but that he had continued at work all the same, that nothing had been done for his diarrhœa, though she had frequently besought him to get medical advice.

Upon the arrival of Dr. Cowan, I gave him the history of the case, and, after an examination, we agreed that he was doing very well, and no immediate danger was to be apprehended, and so explained to Mrs. L—. It was now that we learned that he had worked for six (6) hours the day before in the sun, and on that day had worked in a confined room in the mill up to the moment of the attack.

It is well to state here that Mr. L— was 50 years old, very temperate and regular in his habits, never drank, by occupation a carpenter, at which he labored daily, himself.

About twenty minutes after we had left the house—it being then ten minutes to 2—I was met on the street with the announcement that my patient was dead. Greatly astonished, I hastened to his house—messengers having been already dispatched in all directions for medical assistance—and found him apparently dying, with Drs. Cowan and McKee in attendance, the latter, however, retired after a short interval, having other urgent engagements. His face, lips, and gums were deeply cyanosed, pupils insensible to light, respirations four to the minute, stertorous and very shallow, the under jaw dropped, and indeed he presented every appearance of impending dissolution. His temperature however, was 98½°, pulse nearly normal, only a little weaker, and the surface and extremities warm. Powerful restoratives were energetically used. Ammonia, both the salt and water, were applied to the mouth, gums, and nostrils, with sinapisms to the chest and extremities, an enema of whisky and

water given, which was repeated soon with some ammonia water added, his limbs chafed vigorously, and the air violently agitated about his face. This course having been continued for near an hour with no improvement, it was agreed to give atropia hypodermically (as it was suggested that he might possibly be deeply narcotised), which Dr. Cowan inserted—two minims, 1-120th grain each. No appreciable effect followed the injection, and it was repeated in about an hour and a half, and another enema of whisky and aqua ammoniæ administered. This time the characteristic blush was visible over the face and chest after a while, with the exception of the lips and gums, which still remained livid. In the meantime his hair was cropped, and an ice-bag applied to his head, for it was believed now that we had to do with a case of sun-stroke. No improvement was yet manifested in his condition, the respirations were still four and five to the minute, very shallow and noisy, and he looked as if he might die at any moment. The surface of his body however, remained warm, and there was some increase in the volume of the pulse. Temperature 98½°.

The house was the scene of the wildest confusion, the room so crowded with persons of both sexes that it was difficult to get breathing space for the patient. His wife was so prostrated with the sudden shock that I was called off frequently to minister to her during the time, and indeed for a while I had grave apprehensions for her. At 5 P. M. Dr. Cowan was called off, but before going a consultation was held, and it was conceded that everything had been done for the patient, and as there were no indications of any amelioration in the symptoms, very slight hope was entertained of his restoration.

Very little else was done. He was vigilantly watched, the ice-bag kept continuously to his head, the sinapisms to the chest dampened with aqua ammonia from time to time, and those to the extremities renewed; his face sponged with ice-water, with the inhalations of ammonia whenever there was any flagging of the pulse—which was every few minutes, and fanned incessantly. He had, however, a third enema of whisky and aqua ammoniæ about half-past 4.

At half-past 6, the first faint indications of reäction were observed. The lips began to assume a redder hue, and the respirations increased in number until, in the course of two hours they numbered ten and twelve to the minute, but still shallow and noisy. At 7 P. M., Dr. Cowan came in for a few minutes, and he was able to detect these favorable indications. The respirations would, however, go back to six, and seven, and eight, whenever the ammonia inhalations were intermitted for a few minutes. At 9 P. M. the respirations became fuller and deeper, until at last the whole of both lungs was engaged in the act, and the number gradually increasing. It was noticed now that slight convulsive movements of the fingers followed the inhalations of the ammonia vapor, which were in the course of a half hour participated in by the arms, and then by the body. The movements were next extended to the face and lips, and he would now attempt to cough when the ammonia was inhaled. Step by step the reäction progressed, until at a few minutes after 10 P. M. he awoke to consciousness, having been in a profound coma for eight hours. His first words were for water. It was attempted at first to assuage his raging thirst with pounded ice, but I at last yielded to his appeals, and water was allowed freely. After drinking, he would sink back into a stupor, but the inhalation of ammonia would soon arouse him.

This tendency to relapse back into coma manifested itself for several hours, but towards 3 o'clock in the morning he could be kept awake by talking to him, which I did. He was quite rational, though rather bewildered at first. About half-past 11, as was anticipated, he threw up a quantity of water, and it was again attempted to restrict him to pounded ice, but I again allowed him water, and with a like result. This time water was forbidden, but his thirst had become somewhat allayed. It was still, however, intense. At 4 A. M., I drew off his urine. He frequently expressed a desire for sleep after midnight, which was thwarted by various devices, until he became, towards dawn, perfectly awake, and conversed very intelligently about the occurrences at the mill on the preceding

day. At 6 A. M. I left him, having been with him then sixteen consecutive hours, and at 7 he drank some coffee. His diet through the day was confined to light, digestible articles, and the ice-bag—at his request—was kept to his head all day. During the day he had five small evacuations from his bowels —one of which I saw—resembling bloody water. An enema of starch and tinct. opii was given in the evening, at which time Dr. Cowan again saw him. At 2 P. M. I drew off his urine, and again at bedtime. This paralysis of the urinary muscles continued for one week, but his stools became natural on the third day. He was nourished for a few days with beef essence by enema, and cream and lime water, as there were some indications of gastritis, but these soon passed off, and he regained his appetite, which became ravenous. The only evil results following his illness were extensive ulcerations of his ankles and breast from the mustard, the excoriations of his gums, and mucous membrane of the lips, especially the under lip, made by the ammonia, and the paralysis of the urinary muscles. The first soon yielded to proper treatment, and the paralysis came right of itself. In a short time, convalescence was established, and every thing went on very well. He walked and rode out every day, and was fast regaining his strength. This condition of affairs continued uninterruptedly until Monday—August 24th—twelve days from the date of his seizure, when he partook very heartily of a heavy supper—fried chicken, etc., etc.—being very hungry, and the meal somewhat delayed. The next morning he arose at 5—the temperature being unusually low for the season—and walked into the garden and about, for sometime, returned to the house, had a chill, and vomited a quantity of the evening meal. I was sent for at 7 A. M. and learned these facts from his wife. I found him in bed with his legs flexed on his abdomen, suffering acutely with symptoms of intestinal colic. His skin was hot and dry, pulse full and excited, tongue coated. I gave him a subcutaneous injection of morphia—about one-sixth of a grain—and had hot flannel cloths of tinct. opii and camphor applied to his abdomen.

He became much easier after a while, and I left, having given directions for an enema of warm soap suds and lard to be given in the course of an hour or two, and to take two grains of quinine every two hours. I returned at noon and found him still in considerable pain. I learned that the enema had failed on account of the distress it had caused him, and that his stomach was so acid as to eject at times the cream and lime water. His abdomen was somewhat distended, and tympanitic. I gave an enema of beef essence and whisky, half an ounce each, with 30 drops of tinct. opii, and continued the camphor and laudanum application. During the afternoon he was quite comfortable. I saw him at half past 3, when another enema of whisky and beef essence was given, and again at 8. The acidity of stomach kept up through the day to such an extent that he was able to retain very little nourishment—cream and lime water. At 10 that night I was sent for in haste, the messenger telling me that an attempt to give an enema of warm soap suds and lard —as was directed—had caused alarming symptoms, but when I reached him these symptoms had subsided in a great measure, and I learned from him that owing to bungling management, air had been injected instead of the fluid. I gave another enema of beef essence and laudanum, and remained until he became quiet and easy. His thirst through the day had been readily satisfied with pounded ice. He passed a tolerably comfortable night, but the next morning at 7, when I saw him, he was in great pain, which was then as before principally referred to the hypogastric region. The abdomen was still distended and tympanitic, temperature 101°, pulse 104. Believing now that my fears of peritoneal inflammation were about to be confirmed, I discontinued the quinine, and determined to put him under the influence of opium. I was impressed with the belief that a portion of that unfortunate supper was lying in the lower bowel undigested, and was the main source of the gas that caused the distension and pain. The frequent assertions of the patient too, of his strong belief that relief would follow an "operation," somewhat strengthened this impression. Thus

far the enemata given for that purpose had failed. I concluded however, to try once more to dislodge the offending particles, and about 9 o'clock I gave another enema of warm soap suds and lard myself. He had had an enema of beef essence and tinct. opii soon after my arrival, and had taken cream and lime water. The patient was notably weaker, and began to manifest marked signs of prostration. He perspired freely about the face, arms and hands, but his feet kept warm, as well as the general surface of his body. Mustards were put to his wrists and breast, but were not retained long at a time, owing to the complaint of the burning. At half past 9—half hour after the enema was given—he had a small liquid dejection, and, what is noteworthy in connection with it, the pain which had been heretofore mainly located in the lower bowels, suddenly shifted to the infra-mammary region and stomach, and remained there until his death, greatly affecting his breathing. Another enema of beef essence, whisky, and laudanum was given shortly after, which produced some ease and comfort. I saw him again at 11, and found him in great distress. His wife had become alarmed now, and had contrived to communicate some of her fears to him by proposing, during my absence, to telegraph for his relatives. She met me at the door with this proposition, to which I replied that I thought it unnecessary just yet. I however suggested consultation, and Dr. Cowan was called in. After a recital of these particulars and an examination of the patient, Dr. Cowan concurred with me that the indications pointed to peritoneal inflammation and gastritis, and that the treatment should consist in opiates to narcotism, and preferably by enema, with rich milk and lime water by mouth, and beef essence by enema, and stated to Mrs. L— that we thought she might wait awhile before telegraphing for her husband's relatives. We appointed to meet again at 9 o'clock the next morning. At 12 o'clock, a few minutes after Dr. Cowan's departure, I gave by enema 40 drops of tinct. opii, with beef essence and whisky, and remained with him until after 1. During that time he vomited a quantity of bile at short intervals, but there

was not much mitigation of the violent pain. It should have been stated before, that I gave him in the forenoon about three grains of calomel. At 3 I was sent for again, and learned that he had vomited several times whilst I was away, and once after my arrival. His sufferings now were acute. He perspired profusely, was very weak, and the pain caused by breathing, which he had complained of all day, was much greater. The enemata of laudanum, and the continuous application of hot flannel cloths of camphor and laudanum to the stomach and bowels had failed to bring anything like the relief proportionate to the amount used. Another enema of beef essence, whisky, and laudanum, 20 drops, was given, and his face, hands and forearms sponged off with whisky. His thirst through the day had been controlled without difficulty with cracked ice, and he had taken milk and lime water every hour or two, some of which was retained. In the course of a half hour he felt so much better that he thought he could sleep.

At 6 P. M. I found him again suffering intensely. The interval of ease at my last visit had been very brief. His pulse was 101, and feeble, temperature 102½°, and he exhibited unmistakable signs of exhaustion. I immediately gave by enema near a grain of morphia dissolved in two drachms of water, but unfortunately most of it escaped. After waiting near a half hour, and there being no mitigation of the acute pain, I injected one-sixth grain of morphia hypodermically, which, in a few minutes gave him the only absolute ease he had had that day. He frequently expressed the great relief he felt, and asked me why I had not "done that before." I sat a while conversing with him in a light, cheerful manner, until he intimated a desire to go to sleep, it being then quite dark in the room. I left at 7, and when I saw him again, a little more than an hour after, he was dead, having lived thirty-eight hours from the time of his having the chill. Three-quarters of an hour, or thereabouts, after my departure, the change was noticed, and I was immediately sent for, but the end had come when I reached him.

CHEMICAL AND PHARMACEUTICAL.

"Diruit, ædificat, mutat."—Hor.

Poulticing by Steam.—At a recent reception given by Dr. Horace Dolbell, Messrs. S. Maw, Son & Thompson exhibited an apparatus for poulticing by steam, which had been contrived by Dr. Dolbell. This was shown by a dummy figure, which was kept poulticed on various parts of its patient body throughout the evening. The poultices consist of vulcanized rubber bags, covered with felt, to either side of which is attached a tube for the ingress and egress of the steam. This tube may be supplied from a tea-kettle, or from an apparatus constructed for the purpose, which should be heated on a gas stove in order to regulate the temperature. Of course, it will be observed that the great advantage of these poultices is that a regular heat can be maintained for hours if necessary. It is a dry heat, but moisture can quite easily be adopted if required, by keeping damp cloths under the bag, or by simply wetting the bag itself and covering with a cloth to prevent evaporation. The damp evaporation will thus, in like manner, be kept at an even temperature.—*New Remedies.*

Uncertain Composition of Commercial Fluid Extracts of Cannabis Indica.—Mr. Henry W. Buchanan ("Chicago Pharmacist") publishes the result of an examination of the various fluid extracts of India hemp, and finds that, of sixteen samples examined, the amount of solid extracts in 1000 parts varied from 100.25 to 23.00 parts—only six of the samples gave over 70 00 parts. The amount of resin varied from 74.0 to 17.5; and in one sample no resin whatever was found. The author made a standard preparation from the dried flowering tops of the plant, using alcohol as a menstruüm. From this he obtained 101.00 parts of solid extract and 78.3 of resin.—*Ibid.*

An Adulteration of Belladonna Root.—A sample of belladonna root imported from Germany has been found by Mr. Holmes ("Pharm. Journal") to contain 50 per cent. of a mal-

vaceous root, which he believes to be that of Malva sylvestris. The adulteration is an important one, as it would in this proportion reduce the strength of belladonna preparations one-half; but it is easily detected. Externally the two roots are very much alike, especially when the belladonna is in small pieces; but internally the structure and appearance are very different, belladonna having a very large meditullium and small cortical portion, while in the mallow the two are nearly equal. Also the fracture of belladonna is short, while in the mallow it is distinctly fibrous.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

"Judex damnatur cum nocens absolvitur."

A Practical Treatise on the Surgical Diseases of the Genito-Urinary Organs including Syphilis; Designed for Students and Practitioners; with Engravings and Cases. By W. H. Van Buren, A. M., M. D., Professor of Principles of Surgery with Diseases of the Genito-Urinary System and Clinical Surgery in Bellevue Hospital Medical College; Consulting Surgeon to the New York Hospital; the Bellevue Hospital; the Charity Hospital, etc; and E. L. Keys, A. M., M. D., Professor of Dermatology in Bellevue Hospital Medical College; Surgeon to the Charity Hospital, Venereal Division; Consulting Dermatologist to the Bureau of Out-door Relief; Bellevue Hospital, etc. New York: D. Appleton & Co., 549 and 551 Broadway. 1874.

The high and just reputation of Professor Van Buren led the Profession to expect from him a book of great merit; this expectation has been realized; the volume before us is truly the work of a master; clear in style, comprehensive in scope, sufficient in detail, it will be prized both by the traveled and the untraveled. In joint authorship with Professor Van Buren we find Professor E. L. Keys.

Chapter I., devoted to the diseases of the penis, opens with

an unusually instructive description of the anatomy of the organ. Among the remote results of phymosis our authors mention spermatorrhœa, cystitis and spinal curvature — they might also have added incontinence of urine—as a by no means uncommon result of this malformation. The removal of the redundant prepuce in these cases, particularly with children, gives the most prompt relief.

In Chapter II. the anatomy of the urethra is given and the lesson derived from it is clearly put. "The lowest point of the urethra is just in front of the triangular ligament where it lies about one inch beneath the symphysis pubis. From this to the meatus, the canal takes any position according to the direction given the penis; towards the neck of the bladder, however, the urethra is said to have a fixed curve. This is not strictly true, for straight instruments may enter the bladder; a proceeding rather difficult, often painful, never absolutely indispensable, if indeed necessary. At rest, however, the urethra has a curve which, in the membranous portion, is fixed and runs on an average, at a distance of from two-fifths to three-quarters of an inch from the symphysis pubis. It varies slightly with individuals and in the same individual at different periods of life; being shorter and sharper in the child, longer in the old man. A distended bladder or enlarged prostate lengthens the curve." A close recollection of the relative anatomy here given would prevent many mortifying failures in catheterism. The authors agree with Sir Charles Bell and Sir Henry Thompson, that the proper curve for a catheter, "the one which will mathematically accord with the greatest number of urethræ, is that of a circle three and one-quarter inches in diameter, and the proper length of arc of such a circle to represent the sub-pubic curve, is that subtended by a cord two and three-quarters inches long."

Instrument-makers would do well to study the "faulty curves" and "proper curves" of catheters, as given on pages 31 and 32. A "faulty curve" in a catheter made of silver and made stoutly can be overcome by the operator, but "Ger-

man silver" catheters and steel sounds are fixed—they must be used with whatever curve the maker gives them. "The defect most frequently encountered is a too great straightness of the last half inch—a deviation of the curve at its most important point." It is well, it is necessary in fact, to have a long curve in prostatic enlargement, but in the ordinary urethra of adult life, the sharp curve at the extreme end is essential to successful catheterism.

A distended bladder has often its neck so modified and changed, that the introduction of the catheter in the most skillful hands is an impossiblity. Formerly, under such circumstances it was the custom to tap the organ through the rectum, now, however, the hollow needle of the aspirator passed into the organ above the pubis is found to be much more convenient and positively harmless. The bladder, after being relieved of its contents in this way, returns at once to its normal condition, rendering catheterism an easy procedure.

In the rules for catheterism, upon the position of the patient the volume gives the ordinary directions—viz., "if the right hand is used, the surgeon places himself at the patient's left, and vice versa." An exception to this rule was the late Dr. George C. Blackman. *He used the right hand and placed himself on the right side of the patient.* This distinguished surgeon had wonderful skill in handling the catheter.

In retention of urine, the instrument—which he preferred—his "prostatic catheter," was made of silver with a long curve and corresponding to No. 12 English scale.

The "vertebrated catheter," for enlarged or distorted prostate, receives but little praise in this volume. The prostatic portion of the urethra becomes often so tortuous from outgrowths from or encroachments upon its walls, that in many hands this flexible metallic instrument has proved a great convenience. Some New York authors admit that they have never tried this valuable contribution to the resources of the surgeon. The writer would most respectfully commend it to them.

Nearly two hundred pages are devoted to syphilis, or as Profs. Van Buren and Keys head the subject, "*Chancroid and Syphilis.*"

The very modern doctrine, indeed it might be styled the fashionable doctrine, is taught, that the venereal poison is a trinity, that it consists of the *gonorrhœal poison, the chancroidal poison, and the syphilitic poison.*

From the time of John Hunter up to the close of the first quarter of this century, all physicians believed in the unity of gonorrhœa and syphilis. In 1838 Ricord separated them completely and forever, showing them to be a duality in nature, origin, history, tendency—in everything in fact except that they result from impure congress. More modern syphilographers have made of what Ricord regarded as one disease two distinct affections, they have shown, or have attempted to show, that there are "hard" and "soft chancres"—chancres and chancroids, and that each can be recognized by its appearance, habit and tendency. In the book before us is given a diagnostic table of the "broad characteristics" which are to enable all to distinguish the one disease from the other.

If there is one thing in syphilology which the practitioner has longed for more than another, it is that he might be able to tell a hard chancre from a soft chancre, an infecting from a non-infecting sore. He has been so desirous to be able to inform his afflicted patron that he had or had not a constitutional invasion. Hence we approached these diagnostic columns with interest, and as they were the newest and the freshest, we may add, with hope. The two affections, syphilitic chancre and chancroid, are contrasted under eighteen heads—viz: 1. Nature; 2. Cause; 3. Situation; 4. Incubation; 5. Commencement; 6. Number; 7. Physiognomy; 8. History: 9. Inoculability; 10. Course; 11. Sensibility; 12. Induration; 13. Transmission to Animals; 14. Phagadæna; 15. Bubo; 16. Lymphitis; 17. Prognosis; 18. Treatment.

If chancre and chancroid differ radically and essentially in all these eighteen aspects, then the merest tyro ought to be

able to recognize the one from the other at sight. Still more, the individual below the tyro—one who has no medical knowledge—ought to be able, with this book open at this chapter, to make a differential diagnosis, and to inform a sufferer whether he has a local or constitutional disease. Can Prof. Van Buren, with all his learning, and after years of observation, do this? Let us study this table for a moment. We open at No. 13, Transmission to Animals. What do the columns teach us? Under the head of Syphilitic Chancre, we find "not transmissible." Under the head of Chancroid, do we find transmissible! No; but we find "transmissible with difficulty." Is this light? What is said under No. 16, Lymphitis? In the syphilitic column, we have "syphilitic lymphitis possible." Opposite to this in the chancroidal column, we observe "inflammatory or virulent lymphitis possible," Here the tyro would have trouble. The Physiognomy of the harmful and harmless is given elaborately, if not clearly. We transcribe the whole of of it. The former is described: "Shape—round, oval, or symmetrically irregular. Lesion is habitually flat, capped by erosion, or superficial ulceration, or scooped out, or deep funnel-shaped ulcer, with sloping edges. Sometimes the papule is dry and scaly." The latter is described: "Shape—round, oval, or unsymmetrically irregular, with border described by segments of large circles. Always true ulcer, excavated, hollowed out."

After reading the above, and looking at his case, the man below the tyro, with his book in his hand, would close the volume in despair, and we are not sure but that the veteran would be equally befogged.

After leaving the features, let us turn to what is said under No. 3 situation:

Chancre.	Chancroid.
Usually upon or near the genitals, not very infrequent on the head, hands or nipple.	Very rarely encountered, except on or around the genitals.

What is definite here? Nothing. The admission is made that the usual seat of both is on or near the genitals, but that both are found elsewhere.

These tables are more elaborate than any which we have studied; but elaborate as they are, they are still far from being satisfactory. If there is a duality in the poison, we have failed to find an author who can teach us how to determine it by the expression of the sore. For fear that we may be regarded as inexcusably stupid, let us again quote from the columns. A chancre, our authors, under No. 5, tell us, "Begins as an erosion or papule, and remains an erosion or ulcerates," and that a chancroid "begins as a pustule or ulcer and invariably remains an ulcer." How embarrassingly indefinite! One "remains an erosion and ulcerates," the other "invariably remains an ulcer." When both ulcerate, how are we to tell the ulceration of a chancre from that of a chancroid?

In another place we are informed that we can not distinguish the pus of the chancre and the pus of the chancroid from ordinary pus. Have we a diapedesis here of the white corpuscles? The farther we go, the worse confounded we become.

The conclusion of the whole matter, or what ought to be, is arrived at when we come to the treatment. Is this satisfactory? We shall see. "Local treatment," say our authorities, "but slightly effective" in chancre, but in chancroid, "local treatment curative." In the first, it is "slightly effective"; that is, slightly curative; whilst in the second, it is "curative." Slightly curative and curative, we take it, do not establish fairly a difference in the nature of the two diseases, but rather suggest that they are degrees or stages or forms of the same disorder.

The strong point, the thing which has most been relied upon by the propagators of the duality theory, is based upon the auto-inoculability of chancre. Upon this, what do the columns teach?

Chancre.	Chancroid.
Not auto-inoculable without great difficulty unless irritated and secreting thick pus.	Readily auto-inoculable, producing characteristic chancroid by the third day.

The chancre, we see, can do the same thing that the chancroid can; that is, reproduce itself, if we only irritate it so it

can secrete "thick pus." Whilst it is quiet—unirritated—it can only give us a thin pus, which is impotent!! Whatever may be said of the peculiar theory of the "gentle old man," the Apostle of Syphilization, Professor Boeck, of Christiana—viz., the exhausting the susceptibility to, and the cure of syphilis by repeated insertions of the poison, this distinguished Norwegian certainly demonstrated the fact, that chancre was autoinoculable, and that, too, without being "irritated" or compelled to secrete a "thick pus."

Treatment.—Our authors do not wait, as do some, before exhibiting mercury, until constitutional symptoms are developed. They say truly, "there is no object in waiting for an eruption, by so doing valuable time is lost." Mercury with them is, as it is with all good practitioners, the sheet-anchor, the main remedy, and while they endorse its use by inunction, fumigation, etc., they rely on its administration by the mouth.

Four chapters, nearly one hundred pages, are devoted to stricture of the urethra. The subject is discussed in the most masterly manner. The treatment of stricture is given under the following summary:

1. Alkalies, dilutents, and rest are serviceable in most cases of stricture; sometimes indispensable, if there be any serious complication.

2. All uncomplicated strictures, nothighly irritable or resilient, should be treated by dilatation with soft instruments up to No. 9, conical steel sounds afterwards; reintroductions being made every fourth to eighth day; the older the stricture the longer the interval, as a rule; and intervals of one week being most serviceable in the majority of cases.

3. All strictures at or near the meatus must be cut.

4. Resilient, very irritable, and, as a rule, traumatic strictures, are best treated by divulsion, if they lie below four and one-half inches from the meatus; otherwise, by internal urethrotomy. When a resilient stricture can not be divulsed, it should be cut internally.

5. Impassable stricture may usually be overcome—where

there is no restriction—by time, patience, and skill with whalebone bougies. If finally proved impassable, the treatment is external perineal urethrotomy.

6. Retention is treated by hot baths, ether, opium, tincture of the sesquichloride of iron; failing in these, by puncture above the pubis with the aspirator, or through the rectum to gain time, or by external perineal urethrotomy without a guide.

7. For stricture complicated by abscess, infiltration, or many and large fistulæ, and for extensive traumatic stricture, external perineal urethrotomy.

8. For infiltration, free incisions, stimulants, supportives, with thorough external division of the stricture.

9. For fistula with loss of substance, local cauterization, lace suture, or plastic operation. Where there is no loss of substance, complete dilatation of the stricture is soon followed by closure of the fistula.

MISCELLANEOUS.

"Non omnes eadem mirantur amant que."

Treatment of Psoas Abscess.—Mr. Rivington observes that in treating an ordinary abscess, surgeons hesitate neither in advising nor practicing a speedy evacuation, because experience has demonstrated that the more speedy the evacuation, the more speedy will be the cure. In some special forms of abscess, such as fæcal and urinary abscesses, an early opening is urgently indicated, as well as in perinephritic abscesses; but in cases of psoas abscess depending upon disease of the spine—and these constitute a large majority with which he has to deal—all experience seems to deter the hand of the surgeon. An early opening has no obvious effect in inducing a tendency to repair in the spinal column. It may relieve pressure on the spinal cord if that should happen to exist, but it appears rather

to interfere with and prevent the cure of the main affection. The discharge of the pus is but the signal for lighting up the hectic fever, which is too often only extinguished with the extinction of life itself. Mr. Rivington quotes various authors to show that it is imprudent to open psoas abscesses. Billroth in particular speaks very forcibly, and gives the following general rule: "If the abscess comes from a bone on which an operation is impossible or undesirable, do not meddle with it, but be thankful for every day that it remains closed, and wait quietly till it opens, for thus there will relatively be the least danger."—*Lancet.*

Medicinal Employment of Free Phosphorus.—Mr. Ashburton Thompson, in a paper read before the Medical Section at Norwich, states that he has had considerable experience in the administration of phosphorus, and finds that it acts on the human body in three different ways—as a stimulant, as a tonic, and as a poison. 1. As a stimulant, it is possessed of special powers over the nervous system, which is perhaps affected primarily through the capillary circulation in closest connection with it. Within a few minutes after the administration of a stimulant dose, the pulse rises and becomes fuller, but not firmer; the temperature rises; a general sensation of warmth overspreads the body, the face flushes, and the skin, which may become the seat of much itching and irritation, perspires freely; there appear to be signs of peripheric capillary expansion, and hence the temperature falls three or four degrees; the urine is secreted in unusual quantity; the appetite generally becomes ravenous; the nervous system is relieved from fatigue; and cheerfulness, with occasionally venereal ardour, is felt; more rarely there is increased tactile sensibility. 2. Phosphorus acts as a tonic when given in small doses, repeated at regular intervals, and continued over long periods of time. It is hence beneficial in dementia, and in cases of exhausted nerve functions however produced, whether by mental exertion or consequent upon spermatorrhœa. The dose given should begin, when its stimulant effect is required, with one-twelfth of a grain dis-

solved in a scruple of ether, taken every four hours; when used as a tonic, one-hundredth of a grain may be given, dissolved in cod-liver oil, twice a day.—*Brit. Med. Jour.*

Action of Emetics on Striated Muscles.—Dr. Harnack has observed the curious fact that all the emetics with which we are acquainted have the power of paralyzing voluntary muscular fibre, though it is not certain that all muscular poisons are also emetic. Tartar-emetic and salts of copper and zinc paralyze the heart and voluntary muscles, both in frogs and mammals. Salts of mercury also paralyze the muscles; salts of lead only do so when enormous doses are given; while salts of manganese and tin do not paralyze them at all, though manganese paralyzes the nerves. The emetics of vegetable origin, emetia, apomorphia, cyclamus, asclepia, sanguinaria, delphinia, veratria, digatalin, asarin, and colchicin, all paralyse striated muscles. The author attributes the muscular weakness produced by emetics, in part, at least, to their action on the muscles themselves. His experiments seem to show that salts of copper produce vomiting by their local action on the stomach itself, and not on the nervous centres; for the dose required is smaller when it is introduced into the stomach than when it is injected into the blood. The paralyzing action of emetics affords an explanation of the fact that large doses of emetics, especially when they are injected into the blood, do not cause vomiting. The muscles are too much weakened by the drug to be capable of the necessary exertion.—*Archiv fur Experimentelle Pathologie und Pharmakologie.—Lon. Lancet.*

How to Receive Four Journals by Paying for only Three.—Order through this office three or more of the following Journals, and the American Medical Weekly will be sent for one year gratuitously: The Cincinnati Lancet and Observer, $3.00; Cincinnati Clinic, $3.00; St. Louis Medical and Surgical Journal, $3.00; The Chicago Medical Examiner, $3.00; Chicago Medical Journal, $3.00; The Atlanta Medical and Surgical Journal, $3.00; Detroit Review of Medicine and

Pharmacy, $3.00; Braithwaite's Retrospect, $2.50; Nashville Medical and Surgical Journal, $3.00; Cincinnati Medical News, $3.00; Richmond and Louisville Medical Journal, $5.00.

How to Receive Three Journals by Paying for only Two.—Order through this office two or more of the following Journals, and the American Medical Weekly will be sent for one year gratuitously: The American Journal of Medical Sciences (Philadelphia), with Medical News and Library, $5.00; The Philadelphia Medical and Surgical Reporter, $5.00; The Philadelphia Medical Times, $5.00; The New York Medical Record, $5.00; New York Medical Journal, $4.00; The Boston Medical and Surgical Journal, $5.00; The American Journal of Obstetrics, $5.00; Obstetric Journal of Great Britain and Ireland, $5.00; Richmond and Louisville Medical Journal, $5.00.

MEDICAL NEWS.

"Nulla dies sine linea."

Significant Fact.—England is about to examine into the causes of the pollution of her rivers and the means for purifying them. ——The "New York Medical Record" is to be made a weekly hereafter, at the price of $5.00 annually. It will be a 16-page, double-column journal.———The "Boston Medical and Surgical Journal" is hereafter to be published by its editors, Messrs. David Clapp & Son the proprietors, having withdrawn. ———The old Kentucky School of Medicine has been reörganized; see fourth page of cover of this Journal.———Dr. C. H. Mastin, of Mobile, Ala., is preparing statistics of American lithotomies. He is anxious to obtain a record of every case. The report will be an honor to this country, and it is earnestly hoped that every one seeing this notice will make it known to his friends, and secure prompt reports. State whether the operations are lateral, median, bilateral, medio-bilateral, prerectal, recto-vesical, vagino-vesical, supra-pubic, or perineal.

Give number of cases of each operation; and state whether the gorget, the knife, or the lithotome was used. Record also whether each case was an adult or child; whether successful or unsuccessful; whether male or female; whether white or black or mulatto. Give also the number of stones ———Banting (the friend of fat people) is dead. He left $100,000 to build a home for convalescents.———The Edinburgh University is to gives degrees for successful examinations upon hygiene.——— It is said that an excellent article of vanillin can be made from the pine tree; each tree can be made to yield $20 worth, and remain uninjured. The Carolinians should soon be rich. ———The Prussian Government is cultivating fish and leeches in its own ponds in New Jersey.———Hospitalism was largely discussed at the late meeting of the American Public Health Association. The opinion that the cheap pavillion plan is best, seems to be gaining ground rapidly.———The San Francisco papers publish in each death notice the name of the attending physician.———"Hospital Sunday" is becoming a favorite in Europe; the collections for the support of the hospitals is large; rich and poor contributing. When will America adopt this beautiful method?———The excellent Review in this number is from the pen of that accomplished writer and surgeon, Dr. W. O. Dawson, of Cincinnati, Ohio.———Any one ordering the "Richmond and Louisville Medical Journal" with any other journal through this office, will hereafter receive, without charge, a copy of the "American Medical Weekly" for the whole year.———It has been demonstrated that the winter death rate in London is largely increased by cold and fog. ———Dr. Snow, of Rhode Island, states that, according to the best statistics, the pythogenic origin of typhoid fever is untenable.———Dr. Fordyce Barker, of New York, in a masterly paper, claims that the capacity for child-bearing ceases after the fifty-fifth year.———Memphis, Tenn., has established a Microscopical Society. Louisville has had such a Society in operation for several years.———A valuable suggestion; in epistaxis, spray the nares with a solution of the persulphate of

iron.———The number of medical students in the Louisville Medical College is a little over 300.———Bijardi, the Italian anatomist, has found the thyroid artery given off from the common carotid in 37 out of 131 cases; Quain reports 41 in 292. ———Chloroform has been found in the after-birth and in the urine of the fœtus, when this drug was administered during labor. ——— Billroth has again removed the larynx; patient died in four days afterwards.———The "Journal of Psychological Medicine" has been revived by Dr. L. S. Forbes Winslow, the son of the distinguished originator, Forbes Winslow; it is to be a semi-annual.————Pettenkofer is soon to issue the Transactions of the late German Cholera Conference at Berlin.———The physicians of London have combined to elect one of their own profession coroner. This is as it should be.———In London, there is a birth every five minutes, and a death every eight minutes. The race is close, but humanity, not death, is winner.———In Zeimssen's Handbuch, it is stated that the number of deaths from cholera pandemics from 1816 to 1860, is forty millions.———This Journal will be much improved during the present year.

NOTICE.—The new postal law which went into operation at the close of December, 1874, requires all publishers to pre-pay postage on all of their publications. This will entail upon the undersigned an expense of fully $600 per year for his two Journals. He therefore asks his friends and patrons to remit now the amount due for postage with their subscription, if their subscription be due, and if not due, to send the amount due for postage. These are trifling sums to each subscriber, but in the aggregate amount (as is manifest) to an onerous sum. The undersigned also respectfully asks that subscriptions over-due or becoming due, be now remitted.

SPECIAL NOTICE.

Several publishers offer to pre-pay postage; thus giving to all subscribers from ten to twenty-five cents each. The undersigned, in lieu of this small amount due for postage, gives to each subscriber to the "Richmond and Louisville Medical Journal" twelve engraved portraits of distinguished European or American physicians; these portraits being worth to the subscriber at least twenty-five cents each, or three dollars per annum. To each subscriber to the "American Medical Weekly," for 1875, he gives these three excellent portraits of the following distinguished physicians: Marion Sims, Fleetwood Churchill and Spencer Wells. The portraits in the two Journals

will be entirely different. The first Journal will thus cost each subscriber $2 per year; and the last Journal $1.25 only.

The editor of these Journals, in return for this liberal course, seeks and respectfully asks the earnest support of his brethren. E. S. GAILLARD.

EDITORIAL.

"Nullius addictus jurare in verba magistri."—Hor.

AMERICAN PHYSICIANS.—It is only the really independent and thoroughly discriminating portion of the American Profession which has, in the last decade, correctly appreciated and accurately measured the American physician. Thus placed in the balance and weighed, the practitioners of this country have been proved to be not only a credit to the profession of medicine, but an honor to their native land.

The great mass of the Profession at home have, however, from time immemorial, persistently underrated themselves, and been accustomed to regard all that is European in practice, in teaching, or in literature, as the criterion of merit and success.

The average American, in all the ranks of business and society, has felt and expressed an unbounded faith in the virtues and powers of the American Eagle; for him, its scream is sweetest music; its presence more than magic; its influence potentially infinite. Young America's favorite poetry is Tennyson's exaggeration of this "bird of freedom":

> "He clasps the crag with hook-ed hands,
> Close to the sun in lonely lands;
> Ringed with the azure world he stands;
> He looks down from his mountain walls;
> The wrinkled sea beneath him crawls,
> And like a thunderbolt he falls."

Indeed, to the average American, the eagle is more sacred than was the Albatross to the mariner, or the Ibis to the Egyptian. He unquestionably, though secretly, admires that most celebrated of all school-boy compositions: "The elephint is the largest of all animils; he is very smart; he feeds on kakes and eats apples. Some people prefer the elephint to all

other animils; but as for me, give me the stars and stripes and —the American eagle."

Americans, speaking seriously, are proud of themselves and of the representatives of each avocation, and regard the American records of it as transcending all others. To this rule, the American physician has been the great exception. He has regarded the European physician as the "dulce decus" (the sweet glory) of medical science, and his American brother as a genteel species of pretender; or, as at best, but a shabby reflection from the European medical mirror.

In the present generation, this condition has been materially changed. While many medical foreigners making their bread in America have habitually ridiculed the American physician; while medical lads, with their swaddling clothes still on, regard it as manly to repudiate their own medical countrymen; while boys recently graduated in medicine, and sent for a year or two abroad, have come home only to make themselves ridiculous (unless unusually sensible) by the apeing of everything foreign in medicine and manner; while very many excellent physicians in America question the power of American physicians; it can not be doubted that there are to-day many able members of the American Medical Profession who have weighed their medical brethren correctly; and have accorded to them the high position to which they are justly entitled. To such admirers, and to the great Body of the Profession in this country, it has been most gratifying to find that distinguished Germans (Billroth and Virchow prominent among them) have recently given the most conspicuous and absolute testimony as to the distinguished ability, great merit, and unquestionable power of American physicians. The Profession are familiar with this record. The English have also recently given similar testimony. Among the most recent of such writings is that of Dr. Erichsen, the great surgeon, who, after visiting America, gave the following manly and generous evidence of what he had seen and heard in this country. It is so excellent and meritorious, so worthy of the great Englishman's head and heart, that it is with pleasure published:

"And first, as to the Profession, I may at once say that it appears to me to occupy in America, relatively to the rest of the community, a far higher social status than it does in this country. The reason for this seems tolerably obvious. In the absence of an exalted hierarchy in an established church, and of great dignitaries of the law, these professions do not offer sufficient inducement for men of the highest intellectual calibre to enter them. Medicine therefore stands prominent, as probably the best educated, certainly the most scientific, and consequently in a country where education is so widely diffused and so much regarded, the most respected, of the professions. And in the absence of all titled classes, it can socially more than hold its own in competition with the trading and financial elements which are such prominent constituents of the society of most of the American cities. Perhaps, also, the high position that medicine occupies is owing, in some respect, to the greater uniformity of practice that prevails among medical men in America than with us. For, just as in the law there is no division into barristers and solicitors, so in medicine there is none into physicians, surgeons, and general practitioners. Special aptitude, inclination, or opportunity will necessarily lead men to a greater eminence in particular departments of the profession. But the subdivision into classes and specialties, which is so prevalent here, is unknown in the United States.* With the exception of hospitals for diseases of women, I know of no special hospital in any of the large American towns; and I think that no better proof can be adduced of the inutility of the multiplication of these pseudo-charities, which are too often established in order to foster private gain under the flimsy shelter of that much-worn "cloak" which "covers a multitude of sins," than this fact, that in a population larger than that of Great Britain, with a numerous, highly educated, and active profession, it has not yet been found necessary to institute such establishments.*

* This is an error.—E. S. G.

"Surgery in the United States certainly stands at a very high level of excellence. The hospital surgeons throughout the country have struck me as being alike practical, progressive, and learned in a very high degree. In practical skill, and aptitude for mechanical appliances of all kinds, they are certainly excelled by no class of practitioners in any country. They are thoroughly up to modern surgery in its most progressive forms, and I have never met with any class of men who are so well read and so perfectly acquainted with all that is done in their profession outside of their own country. It would be a great injustice to American surgeons for it to be supposed that surgical skill is confined to the large cities or to the few. On the contrary, I know no country in which, so far as it is possible to judge from contemporary medical literature, there is so widely diffused a high standard of operative skill, as in the country districts and more remote provinces of the United States. The bent of the mind of the American surgeon is, like ours, practical rather than scientific; in fact, there are the same mental characteristics displayed in him that we find here—the same self-reliance, the same practical aptitude, the same curative instinct, which leads him to consider his patient rather as a human being to be rescued from the effects of disease or injury, than as a scientific object to be studied for the advance of professional knowledge. How, indeed, can it be otherwise than that there should be such a resemblance? It is true that in traveling through America one is struck by the fact that there is a singular combination of the new and the old—of the strange and the familiar. That there are differences of remarkable character between the New and the Old World there can be no doubt. I use the word "different" rather than "foreign," because I feel it impossible to apply the word "foreign" to anything American. There are differences in climate, differences in the physical configuration of the country. The verdure that clothes its hills and the vegetation that fertilizes its plains are different from those that we meet with here; but man, in all his characteristics, is exactly the same. There ap-

pears to me, indeed, to be as great, if not a greater difference between the mental characteristics of an Englishman and some of the other inhabitants of Great Britain, than there is between an ordinary Englishman and an American of the Atlantic cities. It may be truly said, though perhaps in a sense slightly different from that in which the poet used the words, that

"Cœlum non animum mutant qui trans mare currunt."

Those who have crossed the great ocean have changed their clime, but not their characters.

The similarity that exists between American and British surgery, and which has struck me very forcibly arises not only from the great resemblance that exists between the American and the English character, but from two other causes which have largely contributed to this end. The Art of Surgery is in a great measure traditional. The method of doing things in surgery is transmitted directly from the master to the pupil. The American surgeon of a past generation acquired in this way the traditionary art of British surgery, and has transmitted it directly to his descendants. Surgeons of both nations drew their inspiration from the same source and drank at the same fountain of knowledge. The names of Cooper and the Bells, of Liston and Brodie, are as familiar to the ears of American surgeons as they are to those of this country. Not only have British traditions thus penetrated deeply into the United States, but the modern American surgeon derives his information from the same sources as does his British contemporary. The "Lancet" is reprinted, and is as widely circulated in the States as in this country; and I find in my own case that my pupils in America are probably more numerous than those in Great Britain.

"The mode of instruction in the Medical Schools of America is necessarily very much the same as here. But there are some differences. Thus the course of education required is generally shorter than with us, and no preliminary examination in the way of matriculation is required, before a young man can enter upon his medical studies. As to systematic teaching, there is no

essential difference in this respect between England and America. It is everywhere much the same. Dissection is easy to be obtained, and the bodies used for that purpose are either furnished gratuitously to the students or supplied at a low cost. There is but a nominal fee required for hospital attendance. The whole system of medical education, indeed, is far cheaper than with us. The chief difference that I have observed is in the method of communicating clinical instruction. The medical schools in the principal cities of the States, especially in New York and Philadelphia, are so enormous that the classes would be too large to be conducted through the wards of a hospital. It therefore becomes necessary to bring the patient to the studen s, rather than, as with us, the pupils to the patient. I will give no opinion as to the value of this method of teaching in medical cases, but in many surgical cases it appears to me to be far more useful than that which is generally adopted in this country. The surgical disease or injury can be more readily displayed in this way to a large body of students than it can when they are crowding around a bed, standing in one another's way, and often hampering the proceedings of the surgeon. There is one peculiarity in the mode of instruction in American hospitals which deserves mention. It is this—that each surgeon of the hospital often only serves for a short period of the year—four to at most six months; each of his colleagues in rotation taking up the practice and the clinical teaching during the remainder of the term. The advantage of this system is that the teacher is not exhausted by continuous work, but returns with refreshed energy to his duties.

"The hospitals in the United States are, as with us, supported by voluntary contributions or by endowments from wealthy benefactors. The Americans are munificent in their charity, and hence these institutions are numerous and well organized. The Americans learned a hard lesson in the deadly struggle of the war of secession—a lesson which is not likely soon, if ever, to be forgotten by so practical a people, unfettered by old prejudices and preconceived opinions. The lesson

to which I allude was this—that wounded and injured soldiers could only safely be treated in the open, in hut or barrack hospitals. That the barrack or hut system is superior to any other for surgical cases there can be no question.

"The new hospitals in the United States are generally built upon a uniform plan, having a central building for the administrative department, and wings for the reception of patients. But these hospitals, magnificent in construction and in all their appliances, as some of them are, have not been found sufficient to satisfy the sanitary requirements of American surgeons. Accordingly, the barrack system for surgical cases is now being adopted. It is proposed to erect, in the gardens of the Bellevue Hospital at New York, a detached barrack-building for the reception of cases of surgical operation and injury. And a similar detached ward will be constructed in connection with the Hospital for Women, where, under the energetic action of Marion Sims and of Emmett, the operations have increased very greatly of late years. At the Presbyterian Hospital at Philadelphia, such a building is in course of erection, and will be completed by the commencement of next year. At the Roosevelt Hospital at New York, without exception the most complete medical charity in every respect that I have ever seen—a hospital the construction of which reflects the greatest credit upon its designers—in this hospital, which is constructed on the plan of a central administrative department, with lateral pavilions, there is a large detached barrack ward erected in the garden, having no communication with the general structure, except through an open corridor. The Roosevelt Hospital appears to me to be a model that might with great advantage be copied in this country.

"Dr. Billings, of the United States Army, one of the most learned and advanced surgeons of the day, is superintending the construction of a hospital at the "Soldiers' Home" near Washington, a magnificent establishment, the Chelsea of America.

"In all the modern hospitals that I have visited in the

United States I have been particularly struck with the extreme attention to cleanliness in all that concerns baths, lavatories, and water closets. These appliances are as perfect as they are substantial, and as ornate as are to be found in the best private houses.

"Surgical practice in America does not differ in any very essential respects from that adopted here. There are necessarily some modifications, and many ingenious appliances; but essentially there is no greater difference between American and English surgery generally than is to be found between the practice adopted in any two London hospitals.

"There is one museum which is so unique, so admirably arranged, and so interesting, that I must direct your attention to it for a few minutes. It is the Museum of the Army Medical Department at Washington. This magnificent collection, illustrating not only every possible variety of gunshot and arrow injury, but also those diseases which are more fatal than the bullet to an army in the field or in camp, has, under the superintendence of Surgeon-General Barnes and of Drs. Otis and Woodward, been most admirably arranged and catalogued.

"American surgeons are very skillful in the management of resections. Sayre has removed the head of the femur fifty-two times, and in the wards I saw some admirable results of the operation, due in a great measure to the very careful after-treatment to which he subjects the patient, and on which he lays great stress.

"I have purposely, as far as possible, omitted mentioning the names of American surgeons, because I felt that there are so many so highly distinguished that it would be invidious and perhaps unjust to make a selection. I can only say that the surgical profession in America contains a phalanx of men alike distinguished for their skill and their knowledge, at least equaling what any European country can produce."

Seeing, then, the testimony of these distinguished and competent witnesses, the American physician, too, can join his countrymen in their beautiful manifestations of faith in the fu-

ture of this country, and in the representatives of all kinds of labor throughout her vast dominions. He can even, at times, "be a boy again," and become as enthusiastic as when, in those early days, it was his wont to eulogize his country, as that proud land extending from Maine to Texas, from Oregon to Florida, from the mighty areas of the frozen lakes to the sun-lit waters of the gulf; when he alluded to America always as the "land of the free and the home of the brave"; when he raved about that ornithological deity, the American eagle. And though that poor bird has, in recent years, been sadly tried over the fearful strife in its own nest, this strife is now over. And while many in its nest have been sadly torn and fearfully wounded; while many are now crippled, helpless, and prostrate, let it be a happy New Year's hope with the physician, as with others, that the great spirit of America (of which this familiar bird is but the symbol), is all sufficient to restore peace and harmony again; to give justice to the weak; to develop fidelity and friendship in the strong; to regenerate the old feelings of reciprocal kindness and conciliation throughout the nation; to rebuild once more this great and wonderful country.

THE MONTHLY AND WEEKLY.—The success of the Weekly has been so great, that the work is already disputing with the "Richmond and Louisville Medical Journal" for the support of the Profession. A few words on this subject are really necessary. The two Journals can, in no respect, be compared with each other; they are as different in character as in size.

The Monthly is intended for the publication of valuable original and selected matter. These articles are devoted to descriptive; to labored research; to clinical reports; to the explanation and defence of facts; to reviews necessarily long of valuable works. Many of the original articles are classic in value. The selected articles are always so. Very often, if not always, the Monthly contains an article, either original or selected, which is of itself worth the cost of the whole year's subscription. Yet not one of those articles could appear in the Weekly. Subscribers to the Weekly would lose them utterly.

In this January number, the article by Dr. Gross, of Philadelphia, is alone worth the cost of the Journal for the whole year. So it will be with almost all other numbers. In these important characteristics, the Monthly differs wholly from the Weekly. No small journal can be compared with it; for no small work can contain these classic and valuable articles.

The Weekly is a multum in parvo. It gives the summaries of facts which are defended and explained in other journals. All original papers short enough for the purpose are published in it; valuable papers of length and embodying years of research being published in the Monthly. Its abstracts are carefully selected. Its full News department makes the work particularly welcome.

The two works are wholly different. The Weekly is a brief chronicler of current events; the Monthly an aggregate of the classic papers of Europe and America. They are complete together; they are incomplete when separated. The subscriber to one needs imperatively the other.

To Editors of Medical Journals.—There is no fact more conspicuous or more to be lamented, than that one may in vain search the medical journals of this country for a line of generous commendation extended to those laboring in the same field. This Journal has repeatedly endeavored to produce a better feeling, but such efforts have been unsuccessful. Not discouraged, this effort is repeated. The physicians of this country need some guide in this matter; for, as a rule, they see few journals in the same office. Something will be said in this issue, and in future numbers there will be more added.

The success of the "Virginia Medical Monthly," edited by Dr. L. B. Edwards, has been deserved, rapid, and conspicuous. After March, 1875, it is to be enlarged to 76 pages and published for $3 a year. The work is edited with decided ability, and will be found a most valuable companion and guide. The number for December (1874) is excellent, and contains the Transactions of the Virginia Medical Society, and subscribers to Volume I., it is announced, can obtain this interesting and

valuable aggregation of instructive papers from the leading physicians of Virginia. This Journal is published at Richmond.

The old "Boston Medical and Surgical Journal," the oldest journal in America, has recently changed hands, and will be published by its editors. This excellent weekly is edited by a corps of talented and accomplished physicians (Drs. J. C. Warren, Thomas Dwight, and Frank W. Draper), and is one of the best journals on either the foreign or domestic exchange list. Its original pages are almost always valuable, and the tone of the work is elevated, dignified, and admirable. Its course is always independent, and it has accomplished great good in the reformation of many abuses. The reading of a specimen copy is earnestly advised.

The "New York Medical Journal," edited by Dr. James B. Hunter, is one of the sterling periodicals of this country. The present editor has greatly improved the work, and evinces a marked aptitude for the responsible duties so well discharged. The contents of this journal are always interesting and instructive; its original matter is often classic in value, and the selected articles are excellent exponents of the progress and truth of medical science. The publishers, D. Appleton & Co., issue the work handsomely and liberally.

The "Chicago Medical Examiner," one of the oldest of the Western journals, has been made a semi-monthly, and improved in a variety of ways. Its typography is excellent; the papers issued are practical always, and the selected matter very instructive to the general practitioner. Its senior editor, Dr. N. S. Davis, is well and favorably known to all physicians in this country. He has made his journal a success, and his son, recently made the junior editor, adds much to the interest and attractiveness of the work.

THE issue for this month (January) has been delayed on account of the unusual size of the number.

WANTED.—Several copies of this Journal for June, 1873; August, 1873; November, 1873; May, 1874; July, 1874. For each copy seventy-five cents will be paid.

SIR WM. HERSCHEL.

THE RICHMOND AND LOUISVILLE

MEDICAL JOURNAL.

VOL. XIX. FEBRUARY, 1875. No. 2.

ORIGINAL COMMUNICATIONS.

"Qui docet discit."

ART. I.—TYPHOID FEVER. By DANIEL H. KITCHEN, M. D., Chief of Staff Charity, Fever and Small-pox Hospitals, New York.

So called in contradistinction to the exanthematous affection, known as typhus, which many practitioners both treat and describe as a complicated form of the same disease. There are certain points of resemblance between the two, but the latter is now known by its distinctive features as an old *friend*, or rather *foe*, under the several appellations of *jail, hospital, ship, putrid, brain, bilious, spotted, petechial, and camp fever*, and can not possibly be confounded by the practiced scientist or the skillful and experienced physician with its insidious compeer, *enteric* or *typhoid* fever. Whereas, the one is an epidemic, rivaling in its decimating ravages its sister scourges (cholera, yellow fever, and malignant small-pox), typhoid is comparatively secret and discriminating in its attacks, and runs a totally independent course.

Pathology.—Conflicting and puzzling as the evidence on the subject has hitherto been, no tangible proof has yet been

adduced which would justify us in regarding the processes of blood-poisoning or the nature of the poison inducing the two diseases as one and the same. Its beginning is generally so unsuspected and insidious, that the determination of the date of its inception is almost an absolute impossibility. The fact that a person infected by a patient suffering from typhoid invariably becomes the recipient of that particular affection, and not typhus, and also that one convalescent from typhoid fever may take typhus and vice versa, is a sufficient proof of the non-identity of the two diseases, and renders almost unnecessary the recapitulation of the interesting experience of the eminent English, French, and American physicians who, from the year 1804, have so persistently and perseveringly made the differential diagnosis of typhoid and typhus the subject of their research. The dissections and investigations of Prost, Petit, Serres, Pommer, and Bretonneau furnished the foundation of our present pathological knowledge, but the far-famed treatise of Louis in 1829 was the first in medical annals to demonstrate the existence of this intestinal lesion with scientific precision, and correctly indicate its concurrent symptoms; and to definitely illustrate the analogies and the differences of typhus and typhoid. Gerhard, Jackson, and Pennock, of Philadelphia, in 1836 (having previously visited Paris for the purpose of investigating and determining this *vexato questio*) were the first American physicians who discovered and promulgated the important fact that the fever described by Louis as *typhoid* fever already existed in America, presenting the same assemblage and development of symptoms, and the same post-mortem lesions as the Parisian fever. Subsequently, between the years 1839 and 1846, the question of the specific distinction of those two fevers became so universal a point of controversy that the combatants, on either side, included among their adherents the most eminent of the medical literati of both continents, the great majority of the American practitioners supporting the theory of specific distinction; but it remained for Drs. Budd and Murchison, Wünderlich and Griesinger, Parks and Peacock,

both orally and by their pen to ground the weapons of combat and put forward a platform on which all could agree.

It is now beyond dispute that the symptoms common to typhus and typhoid alike, are equally common in many other diseases, and can not, therefore, be relied upon as criteria in diagnosis. The stupor, delirium, deafness, general prostration, etc., usually designated as typhoid symptoms are equally characteristic of pneumonia (in some of its forms), pyæmia, uræmia, and even acute tubercle. For this statement we have the authority of Dr. W. Budd, of London, whose extensive experience and sound views on this subject will not be denied.

Typhus leaves no specific lesion beyond hyperæmia, softening the heart and contractile fibre structures, and atrophy of the brain; in typhoid, on the contrary, the specific lesions are enlargement of the mesenteric glands, with the growth of new material in the vesicles of Peyer's glands, and in the minute solitary glands of the small intestine.

Origin of Typhoid Fever.—In reference to the origin of typhoid, Niemeyer remarks that, "in large overcrowded cities, it can rarely be determined whether the cases of abdominal typhus be of miasmatic or contagious origin. At all events, the requirements for the development and increase, either of spontaneous germs or *those from the dejections of typhus patients*, are excessively favorable in such places, as the soil of large cities always contains quantities of decomposed and putrid animal substances. The number of cases of intermittent fever in malarious regions varies with the rise and fall of the water in the marshes, because this induces the decay of vegetable matter, on which the production of the morbific germ of intermittent depends. Abdominal typhus occurs sporadically, and in so-called house-epidemics, in places entirely removed from travel, and where there is not the slightest suspicion of a contagious origin. Infection of the nurses and physician is rarely seen in abdominal typhus, and, when it occurs, it is extremely doubtful whether it be due to the emanations from the patient or from his dejections. Be that as it may, using

the bed-pans, night-stools, and privies where the dejections of the patient have been emptied, appears much more dangerous than being brought in contact with the patient himself."

Susceptibility to typhus poison varies considerably with the individual. Residents of a locality that has been frequently visited by an epidemic are much less likely to fall victims than those who have recently arrived. The statistics of every community, in every climate, prove that an irrevocable law exists in reference to this and kindred contagions embracing the following distinctive features—viz:

Persons Susceptible to Typhoid Contagion.—1. That infants and aged people are rarely attacked by abdominal typhus.

2. Persons in the prime of life and middle age are most susceptible to the infection.

3. Males are more liable to it than females.

4. Strong, well-nourished persons more frequently succumb to its influence than weak, ill-fed individuals; and the disease is much more frequent among the poor than the more prosperous classes.

5. Tuberculous patients are but rarely attacked by abdominal typhus, neither are those afflicted with heart disease, or chronic or acute diseases. Pregnant or nursing women appear to enjoy a special immunity from the disease.

6. And lastly, as a rule *one attack removes the susceptibility to* the disease.

Since the year 1830, exanthematous typhus or typhus fever has gradually given place to typhoid fever, not only on the European, but the American continent, typhus being more commonly found in the large cities, while typhoid revels in the country and more sparsely inhabited districts. Its area extends from the extreme northern parts of Denmark and Russia to the south in Italy, Syria, and Turkey.

Dr. Clark considers this fever the indigenous fever of the United States, where intermittent and remittent fever does not prevail, and as these fevers disappear as the country becomes more settled, typhoid fever takes their place.

Anatomical Aspects.—The lesions found in post-mortem investigations will be found especially interesting and instructive in the consideration of this disease, as affording the most tangible and reliable source of information of the modus operandi by which its devastating career may be effectually stayed. The bodies of those who have become victims in the earlier stages do not exhibit emaciation to any marked degree, but hypostatic congestion is extensively present in the dependent portions of the body, the skin is covered with miliary eruption, the teeth and gums are covered with a black coating, and the nostrils appear smoky, and on opening the body the muscles are dry, hard, and of a dark-red color. The ventricles and large vessels are filled with dark-colored, thick blood, in which float loose coăgula, but seldom any fibrin—though the absence of fibrin is equally a characteristic of other infectious diseases. This condition, however, soon changes in the case of a protracted attack, the blood corpuscles and albumen become absorbed and the blood impoverished. There are no indications in the cerebrum, cerebellum, and spinal medulla, which would evidence the severe functional disturbance present in life. The respiratory organs invariably undergo changes; the typhus laryngeal ulcer, which is frequently found, shows a loss of substance of the mucous membrane, bounded by relaxed edges. It is ordinarily seated at the posterior wall of the larynx above the transverse muscle, and on the lateral edges of the epiglottis, though occasionally it is set more deeply in the region, and is the precursor of laryngeal perichondritis, and consequent exposure and necrosis of the cartilage. There are always catarrhal symptoms (the smallest bronchi being involved), the mucous membrane is of a dark-red color, and the secretion is tough and scanty. Beyond this, the lungs are found more or less collapsed, or imperfectly dilated, collection of the secretion or the swelling of the bronchial membranes communicating therewith rendering the passage impervious. The bronchial and mesenteric glands are swollen, vascular, and bear a medullary aspect; the heart relaxed, its muscles pale, and the endo-

cardium and lining membrane of the vessels infiltrated and discolored. The spleen is enlarged from twice to six times its normal size, its capsule tense, and parenchyma pulpy, and of dark violet or blackish-red hue. Exceptionally, the capsule is ruptured, and blood enters the peritoneal sac thereby. The most important changes, however, occur in the small intestine, from which fact it derives its chief synonym, that of "ileo typhus."

Ileo Typhus.—Rokitansky, whose graphic portraiture of this infection has deservedly become a "household word," divides the affection into four stages, the congestive, the state of infiltration, the sloughing stage, and the ulcerative process. During the congestive process the mucous membrane of the small intestine (and especially the lower part) is considerably hyperæmic, and the mesenteric glands join in the general œdema, and are soft, vascular, and dark colored. In the *second*, or *infiltratory stage*, the redness and œdema are much augmented, concentrating in a marked degree in the parts around the solitary and Peyer's glands, in the lower part of the ileum, which now undergo peculiar pathognomonic changes — the glands presenting a series of hard, gray or yellowish-red prominences, with flat or steep edges, varying in size from a millet seed or a pea to that of a dollar piece, oval in shape, so that they frequently cover a strip of intestine several inches in length. The diseased glands present the appearance of a grayish-white or pale-reddish encephaloid mass, and though subsequent investigations have proved that the intestinal glands are not, in typhus disease, infiltrated with amorphous exudation, but that there is an increase of cellular elements which are peculiar. Sometimes the degeneration extends beyond the follicles, and, as Virchow observes, "there is a medullary infiltration of the connective tissue of the subjacent mucous membrane. The mesenteric glands are of a grayish-red color, quite hard, and enlarged to the size of a bean or hazel-nut. The third stage, in which relaxation, softening, and breaking down occur, produces often abortive typhus, varying changes

in the affected glands, according to the condition of the patient and the immediate circumstances by which he is surrounded. Sometimes it assumes a retrogressive form without the destruction of the follicular wall or the surrounding mucous membrane; the glandular œdema subsides, and the contents are reäbsorbed after the cellular elements have been destroyed by fatty metamorphosis; and it is, in this case, most appropriately termed "*abortive typhus.*" Again, it will occasionally be found that the follicular covering will be changed to a dry, friable slough, of yellowish hue, extending over the whole of the gland, which then resembles in form and size the *plagues de Peyer;* while at other times it is limited to a section of the covering, and the slough presents an angular, round, or irregular form. Still another variation may occur—the glands composing Peyer's patches may rupture and discharge their contents outwardly, without the sloughing. The surface of the Peyerian plagues are, consequently, honey-comb-like in appearance. It is at this period that the œdema of the mesenteric glands is at its zenith, some of them attaining the size of a pigeon's or even a hen's egg. Externally they are of a bluish or brownish-red, while the substance has a grayish-red medullary appearance. In the fourth stage, or that of ulceration, the sloughs formed are thrown off en masse, or after precedent disintegration and loss of substance, a typhus ulcer remains—the shape and size thereof depending entirely on its origin. If it originates from a solitary follicle or a Peyer's patch, it is round or oval; if, on the contrary, it has been only a partial slough of Peyer's gland, it is irregular in shape; its seat, as we have previously remarked, is in the lower part of the small intestine, and the ulcers proceeding therefrom are, naturally, opposite to the insertion of the mesentery; the margin of the ulcer is formed by a bluish-red, and, subsequently, later slate-gray border of mucous membrane, which is movable over the surface. Its base consists of a delicate layer of sub-mucous connective tissue, which covers the muscular coat. In those cases of phthisis in which there is ulcer-

ation of Peyer's glands, the edges and bases of the ulcers are hard and indurated, and the long diameters are transverse to the long diameters of the patches.

On the severance of the slough, the mesenteric glands assume their normal condition, though slightly expanded and more vascular; though occasionally, in the second and third stages, the hyperæmia of the swollen glands and adjacent parts becomes excessive, in which event the contents of the intestines are mixed with blood, the patches resemble spongy, vascular, polypus proliferations, and the membrane itself is of a dark-red color, and covered with ecchymoses. A very serious event in the *third* or *sloughing stage*, resulting from gangrene of the mucous covering, and of the corresponding portion of the serous and muscular coats, is the perforation of the intestine, quickly followed by a severe attack of peritonitis. A milder description of peritonitis may occur without perforation. Another grave complication may take place, and that is hæmorrhage from one of the branches of the mesenteric arteries, due to the extension of the slough through the walls of the vessel.

There are numerous deviations of the intestinal affection, which, notwithstanding, bear unmistakable evidence of their affinity and origin; sometimes only a few of either the solitary or Peyer's glands are affected, while at others the ileum is almost covered with them. In the last-named event, we find the process involving the entire vicinity of the valve, and the variations are so marked as to lead us to expect a succession of attacks. If the colon is attacked (colotyphus), or, more rarely, the jejunum and pyloric portion of the stomach (gastrotyphus), the solitary glands and certain portions of the mucous membrane corresponding to its folds, they each undergo the characteristic changes of typhus. Should death occur subsequently to the recovery of the ulcer and other sequelæ after the disease has run its proper course, the post-mortem appearances would necessarily be somewhat different from those we have described, and depend upon the condition of surrounding organs affected thereby, in which certain anatomical changes would

occur, which rarely if ever occur during first weeks of disease. The bodies of those who die during the third or fourth weeks of the disease are emaciated in a greater or less degree; rigor mortis moderate; skin colorless; and, if any anæmia be present, but little sedimentary congestion. The sacrum, trochanters, and elbows are covered with bed-sores, and destruction of the skin may alone take place, or the soft parts may be involved, extending even to the bones. The teeth and gums have the same blackish coating, of which we have previously spoken, the lower extremities may be slightly œdematous, and, if one or other femoral vein be obstructed by a thrombus, the œdema of the corresponding limb is considerable. Abscesses present themselves in the subcutaneous and intermuscular connective tissue, the parotid glands suppurate, and the skin is covered with petechiæ, miliary vesicles, and ecthymatous pustules. Lobar or lobular pneumonia exists in the lungs, and inflammatory exudations in the pleural sac, and the laryngeal ulcers, as a rule, extend deeply and reach or destroy the perichondrium. The ulcers of the intestines are on the road to recovery, or already cicatrized, especially in those cases where death is due to other causes. *The cicatrization of typhus ulcers never causes stricture of the intestines.* But such is not the case in other ulcerations of the intestines, for there is always more or less contraction of their calibre. As the ulcers heal, the mesenteric glands become normal in size, or shrink and consolidate; and, in some cases, become caseous, and ultimately calcareous. When the healing is delayed, the edges and base of the ulcer itself may, in some cases, be found ulcerated, and erosion of vessels, abundant intestinal hæmorrhage, or perforation of the intestines becomes exceedingly probable. When death occurs late in the disease, besides the residuüm of the typhus processes, evidences of croupous and diphtheritic inflammation of the mucous membrane of the intestinal canal, of the large intestine, and sometimes of the gall-bladder, may be discovered.

Some authorities affirm that Peyer's glands begin to disappear in adult life, and we only find traces of them after forty-

five years of age. Such being the case, the characteristic intestinal lesion of typhoid fever is wanting in those cases that occur after that age.

The causes of death in cases of typhoid fever may be thus briefly enumerated:

1. By a general poisoning of the blood. If this poisoning be primary—that is, from the causes common to cholera, small-pox, and other contagious diseases, it usually occurs at an early stage, and is usually associated with cerebral congestion. If it occurs later, when the danger may be supposed to have passed, it is termed secondary poisoning or *septicæmia*, and is most likely due to the ulcerated intestines, with the bowels, in all probability, on the verge of perforation.

2. By the involvement of excretory organs, such as the kidney or bladder, thus aggravating the process of blood-poisoning.

3. By the congestion of the brain and lungs, in consequence of the poisoned blood, which are still further developed by the circulation, in the blood vessels, of putrid juices, or the fibrinous débris of clots in a granular condition, acting as plugs in the varicose veins surrounding the sloughs and ulcers of the intestines.

4. By hæmorrhage from the bowels during the separation of the gland-sloughs.

5. By exhaustion from profuse diarrhœa in cases where the catarrh of the mucous membrane has been excessive.

6. By peritonitis, with or without perforation of the intestine, which may take place at two periods of the fever—viz., during the separation of the sloughs, from the twelfth to the twentieth day, or during a protracted convalescence, the result of intense protracted fever and profuse catarrh.

7. By peritonitis, consequent on suppuration of the large mesenteric glands and rupture of their enclosing capsule; or from the bursting of softened new growths from the spleen into the peritoneum; or from ulceration of the gall-bladder.

Mortality.—The following facts in relation to the relative

proportion of the two sexes amongst the patients, the age at which the community are most susceptible to its influence, and the average mortality from its ravages, will possibly interest the reader.

The average mortality in typhoid visitations, whether on the American or European continent, is 1 in 5½, or 1 in 6. It is considerably less in autumn than in spring, and least of all in winter. It is much greater among males than females, and the average age of fatal cases is about 23. Dr. Murchison records that, in his experience (which, on the whole, has been ratified by the returns on this continent), the percentage of cases bears the following relation to age:

Under ten years,	6.04
Under fifteen years,	20.14
From fifteen to twenty-five years,	52.08
Twenty-five years and upwards,	27.76
Thirty years and upwards,	14.22
Forty years and upwards,	5.19
Fifty years and upwards,	1.46
Sixty years and upwards,	0.5

The average age of typhoid fever in accordance with this statement, is 21¼ years, and the fever is preëminently one of childhood and adolescence.

The following Table shows the Statistics of Typhoid Fever in this Hospital for One Year:

No. of patients admitted in Fever Hospital from Nov. 1, '73, to Nov. 1, '74.	Male.		Female.		
140	65	Under 10 years, - 4 From 10 to 15, - 2 From 15 to 25, - 33 From 25 to 40, - 16 From 40 to 50, - 5 From 50 to 60, - 4 From 60 to 70, - 0 From 70 to 80, - 1 65 Total, - -	75	Under 10 years, - 5 From 10 to 15, - 3 From 15 to 25, - 29 From 25 to 40, - 36 From 40 to 50, - 4 From 50 to 60, - 0 From 60 to 70, - 1 From 70 to 80, - 0 75 - - - - 140	
No. of deaths in Fever Hospital from Nov. 1, '73, to Nov. 1, '74.	**Male,**		**Female.**		**No. of Discharges.**
27	16	Under 10 years, - 1 From 10 to 15, - 1 From 15 to 25, - 7 From 25 to 40, - 4 From 40 to 50, - 2 From 50 to 60, - 1 16 Total, - - -	11	Under 10 years, - 2 From 10 to 15, - 0 From 15 to 25, - 5 From 25 to 40, - 4 From 40 to 50, - 0 From 50 to 60, - 0 11 - - - - 27	108

Pathological Facts.—The most noticeable lesions, as gathered from the foregoing details, are:

1. A generally congested state of the mucous membrane of

the intestines, especially developed in the vicinity of the solitary glands, which are surrounded by vascular rings and clustered groups of vesicular glands, constituting Peyer's patches.

2. Associated with this congestion, the gland vesicles become obviously prominent.

3. After the gland-growth has been fully developed, the generally turbid condition of the mucous membrane, and the congestion previously mentioned, subsides.

4. Softening of the contents of the tumid gland-cells.

5. The conditions under which the softened contents of the glands are eliminated; (1) Without ulceration, by the rupture of the hitherto closed gland vesicles; (2) By ulceration of the swollen gland vesicles; (3) Elimination of the typhoid growth by sphacelus.

Erysipelas, parotitis, phlebitis, and similar local inflammations, are by no means uncommon in typhoid fever. Dr. Parkes remarks, that it is extremely probable that deficient urinary excretion may be a prolific cause of their production; but experience has taught us that, whether that may be so or not, these lesions may be excited simply by cold, and that the absorption into the blood of putrid substances from the ulcerating patches of Peyer, or other diseased parts, are the cause of most of the secondary inflammations occurring in typhoid, enteric, or intestinal fever.

Symptoms.—It frequently occurs that, for several days or even weeks, certain premonitory signs or symptoms occur, too indefinite to indicate the nature of the malady at the time, but of great diagnostic value as collateral evidence of its typhoid character, as distinguishing it from affections that have no premonitory symptoms. These *prodromata*, as they are called, comprise a general *malaise*, mental anxiety, dullness of spirits, accompanied by relaxation of the system, loss of appetite, indigestion, restless, and sleep disturbed by ugly dreams, headache, dizziness, pains in the limbs (apparently of a rheumatic nature), and constantly recurring hæmorrhage from the nose.

In the great majority of cases of typhoid fever, whether of

the mild or severe type, a remarkable periodicity characterizes its course. Each week has its own distinctive succession of incidents; and the first and last days of each week witness changes either temporary in character or lasting until the fever departs.

The disease is generally supposed to begin on the occurrence of the first chill, or series of chills—though there are some rare cases in which no chill occurs—so that it is sometimes (especially in patients who have paid no attention to the premonitions) a matter of extreme difficulty or impossibility to determine whether the disease is at its seventh, eighth, thirteenth, or fourteenth days.

First Week.—Even during the first week, the patient is much prostrated and weak, generally confining him to bed: he complains of a dull, fixed pain in the forehead; a severe dizziness on rising in bed or attempting to walk, and lancinating pains in the extremities. His sleep is much broken by dreams (in which he will utter whole sentences in a loud voice), though while awake he is perfectly conscious. He exhibits no interest in surrounding incidents or persons, and replies to questions very reluctantly and slowly. He has a slimy, bitter taste in his mouth, great thirst, and no appetite. Constipation usually exists for the first four or five days, and it is not until the close of the week that the stools assume a pulpy or fluid form. The passages are comparatively painless. Frequent epistaxis now occurs, which appears to relieve the headache. Signs of bronchial catarrh appear—viz., cough and mucous expectoration. The patient's face is much changed in appearance. While in a reclining position, his cheeks and face appear red; after sitting up for a short time, he looks pale and meagre. The tongue is moist, red, and smooth, and is covered with an epithelial coating or slimy mucus, not unlike a piece of gold-beater's skin, through which papillæ project like red points; no involvement of the heart and lungs is apparent, though the peculiar whistling sound betrays the presence of catarrh in the smaller bronchi; the abdomen is swollen and tense, and press-

ure produces pain, not only in the ileo-cœcal region, but in the epigastrium. In the right iliac fossa, especially after severe diarrhœa, a gurgling sound will be discovered on slight pressure, accompanied by sensitive tenderness. The spleen now exhibits considerable expansion, and a careful examination of the patient's body will discover a few pale-red roseolar spots, about the size of a lentil, on the epigastrium, neighboring portions of the abdomen, and breast. The last and most important typical symptoms of typhoid affection is the temperature, which we now note: it rises regularly, the evening temperature being about two degrees higher than that of the morning, and the morning temperature of the succeeding day being about one degree lower than that of the preceding evening; for instance, suppose a patient, on the third evening of the fever, to have a temperature of 102.6°, on the following morning it would register at 101.7°, and on the evening of that day 108.7°. The urine is high-colored, concentrated, and of increased specific gravity.

Second Week.—The pains in the head and limbs subside; the dizziness becomes worse, and deafness is more or less present, due to a propagation of the typhus oral and pharyngeal catarrh of the Eustachian tube and cavity of the tympanum. The listlessness increases, and the countenance wears an expression of stupidity, the intellect becomes cloudy, and the patient falls into a torpid, somnolent state, from which he can scarcely be aroused. Notwithstanding the parched condition of the mouth, he evinces no desire for drink, but when offered him, will swallow it with avidity. Toward the close of the week, stools and urine are both passed in bed, often involuntarily. The mental activity is nearly eclipsed, and the entire bearing of the patients demonstrates that they are totally unconscious of their surroundings, and living in an excited dream, gesticulating and speaking under the influence of morbid impulses and delirious hallucinations. As a rule, the watery evacuations vary from six to fifteen or twenty daily, though sometimes they are limited to three or four, and have the appearance of partially-

cooked pea-soup, in which the meal has sunk to the bottom. The catarrh is frequently so extensive that there is either cough or expectoration; the respiration is hastened and superficial; the cheeks have assumed a brownish-red or bluish hue; the eyelids are half closed, with a collection of dried mucus at the corners, the conjunctivæ injected, and the nostrils smoky-looking. A tough, brown, faliginous coating clings to the teeth and gums, and the tongue is enveloped in a brown crust; an unpleasant odor is exhaled from the mouth, due to the decomposition within; the movement of the tongue is much impaired, and speech becomes indistinct; loud ronchi numerous in the chest; the excessive meteorism of the intestines has effaced the natural lineaments of the belly, and the roseolar eruption has considerably increased, and spread to the back. The bodily temperature in the evening is from 104° to 106°, and in the morning the remission is but slight. Soft, full, and almost double pulse, 110, 120, and even more at times. Urine albuminous.

Third Week.—The patient is now so weak as to be entirely helpless; contractions of single fasciculi in the relaxed muscles may be both seen and felt, the stupor and somnolence are at their zenith; the noisy delirium and restlessness have ceased; the muscular coat of the bladder is paralyzed, and the bladder itself excessively distended. The meteorism and other symptoms have become very decided; the roseolar spots begin to pale; sudamina increase, and petechiæ appear. Detachment of the epidermis takes place, and the exposed cutis sloughs. There is scarcely, if any, remission, in the temperature or the pulse. And if the disease goes from bad to worse, there is subsultus tendinum, picking and fumbling of the bed clothes, and sliding down towards the foot of the bed. Under favorable circumstances, there is a subsidence of all the symptoms about the middle of the week, but fatal termination is most common at this period, death resulting from œdema of lungs, after the weakness, prostration, temperature and pulse have

reached the highest point. The more the respiration is affected the sooner and more readily paralysis of the heart occurs.

Should the patient recover, *fully three or four months must elapse before he can be considered fit for ordinary labor*, after a severe attack of typhoid fever.

TREATMENT.

Of those cases that have come under our immediate observation in hospital practice.

In the mild ones, the only treatment that patients have received, is plenty of fresh air, regular house diet, and in addition, one pint of beef tea, one pint of rice and milk, and four ounces of cream.

If the skin was dry and hot, a saline diaphoretic was given, as liq. ammon. acet.

If the patient's pulse was weak, soft, and above 120, whisky in half-ounce doses was given every four hours, or as often as every hour and a half. Its effect was watched, and if it flushed up the face, increased the delirium, and the tongue became drier, the dose was gradually lessened. If, on the contrary, the pulse became stronger, diminished in frequency, the delirium less, and the tongue moist, it was continued. In these cases the extra diet was augmented—the patient received two pints of beef tea, and the amount of cream was doubled.

In those cases where the diarrhœa was excessive, the patient having over three evacuations a day, some vegetable astringent, as tinct. kino, catechu. or krameria was given in connection with an opiate.

When there was hæmorrhage from the bowels, turpentine was administered, and acted very well.

When there was great tympanitis, so as to interfere with respiration, the turpentine was given internally, and also used in the form of stupes to the abdomen.

In controlling the delirium when it was very great, opium acted better than any other drug.

Hydrate of chloral had very little effect in quieting the patient.

It was necessary in some instances to use the straight-jacket when the delirium was violent, and drugs had little or no effect.

In those cases where there was low, muttering delirium, with carphologia, and sliding down towards the foot of the bed, carbonate of ammonia was given.

Cases complicated with broncho-pneumonia or lobar pneumonia, dry cups, the oiled muslin jacket, and carbonate and muriate of ammonia, in connection with sulphate cinchona was used.

To prevent the formation of bed-sores, the patient's position in bed was varied, and air-cushions placed so as to relieve the pressure on the exposed parts. After they had formed, poultices of linseed meal and charcoal were applied, to hasten the separation of the slough. The granulating surface left after the removal of the dead tissue was washed with a solution of carbolic acid, and then dressed with Balsam of Peru.

During the stage of convalescence, the mineral acids and cinchona were given.

ART. II. — CIRCUMSTANCES MODIFYING THE MORTALITY OF AMPUTATIONS. By E. T. EASLEY, M. D., Dallas, Texas.*

The liability of amputation-stumps to take on pathological action has long been a matter of grave attention among surgeons. This susceptibility has been considered so great that Cruvelhier, in remarking upon the condition of the uterus after delivery, compared it to an amputated stump, an analogy so striking that it has become famous.

Those who are in the habit of decrying the use of the knife,

* Upon the recommendation of a Board of impartial experts, the Thesis Medal of the Louisville Medical College was awarded to the author of this excellent essay March, 1874.

are apt to speak of amputation as the opprobrium of our art, but this is to take a very narrow view of its object. *To save life,* is the first object, nay the first *duty* of the surgeon, and to do so by the necessary sacrifice of a limb, is the truest "conservatism." When life is so saved or prolonged, surgical science may well claim a triumph—a triumph as legitimate indeed, as when such results have attended the torsion or ligation of arteries. In relation to the different forms of amputation, it is perhaps sufficient to say with Mr. Bryant, that "under all circumstances, any form of amputation must be looked upon with favor that takes away *only* what needs removal; that provides sufficient integument to cover the end of the stump, insures that the cicatrix is out of harm's way, and that no nerves are likely to be involved in the cicatrix or fixed to the end of the amputated bone." Certainly no operation is to be approved that would sacrifice more of the body than would otherwise be done, merely for the purpose of attempting to secure better stumps. Nor, however desirable this end, should the risks of the operation be increased in any way to attain it. It is always highly desirable to cut through healthy tissues, but this can not be accepted as an invariable rule; often it will be found impossible to operate through sound textures without too great a sacrifice of limb. Nor is it, as has been by late writers sufficiently shown, always absolutely necessary to do so. To amputate through infiltrations of a malignant character, would certainly be useless and bad practice; but to operate through textures infiltrated merely with inflammatory products that are reparable, is not only justifiable, but wise surgery. "Tissues infiltrated with inflammatory lymph," says Mr. Bryant, "indeed often unite rapidly and well; and I have seen 'brawny flaps' unite by primary union as well at least as others not so infiltrated." The beauty of a stump, although not to be under-estimated, is nothing if it is to be obtained at the price of increased risk to the patient. The brilliancy of an operation is a snare which should never draw the surgeon away from his main object. I do not propose to dwell upon

the different modes of amputation; it is true that good stumps are often obtained under the most untoward conditions, and the reverse. The form of amputation, or the shape of the flaps, seems to have little to do with the mortality from this source. The success of an amputation doubtless turns more upon the age, sex, diathesis and other circumstances than on the manner in which the amputation has been done. It may not, however, be improper to remark, in passing, that all of the different modes of amputation are but modifications of the two principal methods, the flap and circular. We have amputations for disease, accident, and of expediency; which of these is done, as we shall see, has an important bearing on the result. To decide upon the indications calling for an operation of course requires a high order of knowledge, and for its proper performance a thorough acquaintance with the anatomy involved, and a manual dexterity that renders the surgeon master of the situation, so far as the mechanical part of his work is concerned.

I shall go on now to say something of the death rate of amputations, and this, as before intimated, depends on quite a variety of causes. It may now be safely laid down, in the light of the most recent reports on this subject, that the mortality from amputation is more determined by age than by any other point. To Mr. Holmes is due the credit of having first statistically shown this fact. It may now be fairly stated as settled beyond controversy. The later writers, reviewing their statistics, at the suggestion of Mr. Holmes, have, some of them, been not a little surprised to find his conclusions correct. The proposition in this relation can not, probably, be better stated than in the language of that illustrious surgeon: "The risk of amputation is constantly rising throughout life, and at any given period after thirty years of age the risk is more than twice as great as it was at the same period after birth." The tabular facts which have been arranged upon this matter are quite significant, and the conclusions reached very definite. Thus, out of 103 cases under 20 years of age, 10 died, or 1 case in 10; out of 111 cases between 21 and 24 years of age, 21 died, or 1

in 5; out of 74 cases over 40 years of age, 22 died, or 1 in 3½.

Aside from any special lesions that are more apt to exist as age advances, we have a lower vitality and less recuperative power to overcome shock; a positive insufficiency of plastic reparative matter is the result. If too little action is present from deficiency of power, of course healthy granulations can not ensue; hence the patient, with constitution already enfeebled, sinks under the septic influence of morbid or insufficiently organized products, or under exhaustion, irritation or the complications resulting from them. Now it is obvious enough that cicatrization (which ordinarily begins at the surface and goes toward the centre) can not itself progress until healthy granulation, bathed in laudable pus, has made its appearance. The mere fact then that the stump is not advancing in repair, or is indolent, subjects the patient to many dangers. I do not now take into consideration any pathological phenomena that may have previously existed, or that are in present operation, but say that the simple fact that life is past its meridian should be gravely considered in discussing the propriety of an amputation. So important an element is age in determining the result of an operation, that it may be laid down that operations in very old people, especially if severe and attended by much shock to the nervous system, are commonly fatal; amputations in individuals above the age of seventy are very rarely successful. As a general rule, therefore, it may be said that the younger the patient the greater likelihood is there of a successful result. In early life also there is greater exemption from low secondary diseases of the erysipelatous type, as well as a reäctionary power that bears a direct relation to the age of the patient. The general influences that mainly determine the result of amputation, so far as the recovery of the patient is concerned, may be arranged under three heads, as follows: (1) Those that are connected with the state of the patient's general health at the time of its performance. (2) The hygienic conditions by which he is surrounded after it is done. (3) The

special dangers connected with the operation itself. Under the first head it is to be remarked that success depends far more upon the patient's constitution than on the severity of the operation or the manual dexterity with which it is performed. Too often indeed we see the condition of the patient's health, or existing diatheses, affecting operations (done apparently under the most favorable circumstances), in a very remarkable way. A patient is not infrequently carried off by fatal disease supervening upon some extremely trifling operation. The amputation of itself, in these cases, ought not in any way to endanger life, were it not that the patient's constitution was in so unhealthy a state that the slightest exciting cause was sufficient to call into activity fatal disease. Independently of actual organic lesions, there are various conditions of the nervous, circulatory and general physical system that exert an injurious influence. Thus, persons of an irritable and anxious mind, or of feeble and irritable habit of body, do not bear up well under surgical treatment. Such persons soon become exhausted, reäct slowly, and may sink without rallying. Individuals overloaded with fat are poor subjects for operation.

It is to be remembered that fat is a lowly organized tissue. In fat persons the circulation is usually feeble, wounds heal slowly, and are apt to slough and become phagædenic. Short of actual structural disease of important organs, says Mr. Erichsen, "I know of no condition more unfavorable to success after operation than premature or excessive obesity." The propriety of the remark is unquestionable, and coming, as it does, from so high an authority, is entitled to great weight. It needs no argument to show that a man of sound constitution, unimpaired by excess, of regular habits, and whose mind and body have never been overstrained, in submitting to the surgeon's knife, has vastly the advantage of him of whom opposite propositions are true. Hence it follows that individuals with the same hygienic surroundings, and treated with equal care, give such dissimilar results; their antecedents having more to do in the induction of these results than their present condition. In the

one case, the inflammatory action will not overstep the bounds of what is necessary for the reparative process; in the other, most likely, it will not attain this, but degenerate into a low and septic form, terminating in some of those secondary affections (as erysipelas, septicæmia, necrosis, etc.,) that are so apt to end in death. I do not wish to dwell upon this part of the subject, but I can not help reverting to the great necessity which exists for the surgeon's instituting strict inquiry into the habits, former diseases and social status of the patient, in making up a decision as to operation. The condition of important organs is to occupy a very considerable share of attention; (1) The state of the heart, lungs and kidneys is to be carefully looked to, before the knife is used; organic disorders of these, although they may be apparently trifling, seriously militate against fortunate results. It is almost unnecessary to say that if the patient's *system* is contaminated with malignant disease an operation is not to be thought of, as a speedy reäppearance of the disease will inevitably occur. (2) The results of an operation are materially affected by the hygienic conditions to which the individual is afterward subjected. Chief among those circumstances that unfavorably influence the result of amputation, may be mentioned unwholesome or inadequate diet, exposure to contagious or miasmatic influences, and the overcrowding of individuals operated on. The very fact that persons are so crowded together of itself creates an impure state of the atmosphere, productive of the most disastrous consequences. We often hear of gangrene and erysipelas appearing in crowded wards, when their origin is utterly inexplicable in any other way. Under such circumstances of ill ventilation and insufficient space, it is not surprising that the mortality becomes enormously increased. To obviate the evil effects from this source, it is plainly necessary that there should be full space, free currents of air, and such disinfecting measures as are most likely to absorb the animal exhalations. Attention has been recently called to the fact, which seems now to be admitted, that barometrical conditions of the atmosphere enter largely as

an element in deciding the mortality of amputations. This point has received especial inquiry from Dr. Addinell Hewson. Ashhurst quotes Dr. Hewson as saying: "At the Pennsylvania Hospital the mortality varied from eleven per cent. with an ascending, to twenty per cent. with a stationary, and twenty-eight per cent. with a falling barometer." "Surely," he adds, "these figures need no commentary as to how well they sustain the idea that the results of operations are materially influenced by the weather, and that the risks from shock are increased by opposite conditions"; these are the most suggestive facts that I have been able to obtain in this connection. Reasoning *a priori* we conclude that they are correct, for it is not strange that the pernicious effects of morbid effluvia should be modified by elevations and depressions of temperature. It is true also that a rising temperature exerts a directly tonic effect on the system generally, and that it is unfavorable to the life and development of those microscopic organisms on which it is said that low and diffuse inflammations in many cases depend. In regard to disinfectants, it is certainly safe to say that they are useful in proportion to their capacity of absorbing or precipitating noxious emanations. It is apprehended that too much stress has been laid on the mere *odor* of certain so-called disinfectants, while their real value has been erroneously estimated.

We have now arrived at our third division of the causes influencing the sequelæ of operative procedures—namely, those which pertain to the operation itself. We mean those influences on the chances of recovery that are implied in the operation; that are unavoidable and inseparable from it. In respect to the *seat* of an amputation, the principle is that the danger increases in proportion to the size of the part amputated; the nearer the point of election approaches the trunk, the greater the probability of an unfavorable issue. In the larger limbs, especially in the thigh, every additional inch sacrificed, impairs so much the character of a fortunate prognosis. It does not require any elaboration to show that the amputation of a thigh is vastly more perilous than that of a finger or toe. Statistics

arranged by Erichsen and Malgaigne exhibit clearly and conclusively the direct ratio of increase of mortality as the operation approaches the trunk. Hamilton states, as a rule, "the amputation should be done as far from the body as a thorough removal of the injured or diseased structures will permit."

A circular from the Surgeon-General's office at Washington shows a percentage of mortality ranging from 1.60 to 85.71 as the operations proceeded upward toward the vital organs. It is plain then that no more of a limb is to be taken off than is necessary; nor is this precaution to be lightly regarded, for, as before intimated, an unfavorable result may be brought about by the loss of an amount of tissue apparently quite insignificant. It is worthy of remark under this head that the size of the part amputated not only influences the *general* mortality, but also the particular *cause* of death. Now, death following the loss of one of the smaller parts (a finger or toe) will be caused by some unhealthy state of the constitution; for instance, erysipelas; whilst, in one of the larger limbs, a fatal termination will oftenest be brought on by shock, secondary hæmorrhage, or exhaustion from the abstraction of the amount of blood contained in the limb and that lost during the operation. It may be said, in a general way, other things being equal, that amputations through the cancellous or articular ends of bones are less fatal than when the section is through the medullary canal. This is true, for the obvious reason that when the canal of a bone is opened we have the danger of necrosis, of low suppuration, of phlebitis and pyæmia to encounter, as the result of injury to the endosteum. One of the most important, if not indeed the most important considerations in this connection, is the *cause* for which amputation has been done. It has been fully shown that operations for injury are much more fatal than those for disease. The exceptions being those operations for malignant disease. Here, aside from the eminent certainty of a recurrence of the malady, the solids and fluids are so vitiated that the worst results may be apprehended. The more chronic the disease, in most instances, the more favorable the progno-

sis. In these, the constitution, although thoroughly implicated, is in some degree inured to suffering, and unless too much prostrated, will have great relief from the removal of the offending member. On the other hand, in cases of injury, the system profoundly depressed by the shock of the wound, contused or lacerated it may be, is but poorly prepared to meet the ordeal of another commotion which will be felt through all the vital powers. It is not to be forgotten, however, that amputations for *acute suppurative* disease give very unfavorable results. Especially is this observable if disorganization of a large articulation exists. Here the tendency to septic disorders is very strong, the blood being loaded with pathological material, the products of inflammatory action. It may be said then that such interference should not be undertaken, except under conditions of the most urgent necessity. There are a class of amputations yet to be mentioned that are especially fatal—amputations of expediency. These are not demanded, so far as life is concerned, but are done through motives of convenience, as when a part is taken off for deformity, tumor, or anchylosis. I gather from the statistics that I have been able to see bearing on this point, that operations of expediency at any period are attended with as large mortality as traumatic amputations in the aged. I do not precisely understand why this should be so. I am at a loss to comprehend why operation for deformity, for instance, should more seriously imperil the individual than that for chronic disease, or for injury. I suppose, however, that there can be no appeal from the *facts*. Mr. Bryant (whose fidelity in collecting reports is one of the attractive features of his excellent "Practice") has shown that at Guy's Hospital death has followed in 40 per cent. of these amputations of the lower extremity. A statement that reduces the indications for the operation within very narrow limits, and one for which I have not heard any adequate cause assigned. Surgeons have not failed to remark that amputations of the lower are more prejudicial to the prognosis than those done at corresponding parts in the upper extremities. The further the

part is removed from the great centres, the less, of course, will be its vascular and nervous supply. Hence the process of repair goes on more slowly, and is more apt to be interrupted or inadequate. There is also in these distal localities less ability to meet any adventitious complications that may arise. The *time* at which an amputation is performed after the infliction of an injury, exercises a very considerable influence. Not only the death rate itself, but the immediate *causes* of death are affected by the period at which the operation has been done.

Traumatic amputations are divided into primary and secondary. By primary amputations, we mean those that are performed during the first twenty-four or thirty hours, before inflammatory action in the injured limb has occurred. By secondary, some surgeons mean those amputations that are practiced at any time after twenty-four hours has elapsed; others restrict the term to the period of suppuration of the part, calling those intermediate operations that occur between these two periods—viz., the first twenty-four hours and suppuration. This latter division, the intermediate, seems now to be practically ignored by the best systematic writers. We may then consider amputations as primary, those done during the first twenty-four hours; and secondary those after inflammatory action has set up in a part. There has, at times, existed much contrariety of opinion and consequent diversity in practice upon this subject. It appears now to be pretty well settled that, as a rule, secondary amputations are best in civil, and primary attended with least mortality in military procedures. This statement as to operations in civil practice is established beyond question by statistics of hospital as well as private practice, both in this country and in Europe. That primary amputations in military practice are attended by greatly more fortunate results than the secondary, has been, says Gross, "the result of the experience of surgeons in all ages, and in all countries, since the invention of gunpowder."

It has been shown that the conclusions reached peviously were abundantly verified on both sides during the late war.

The fact that the results of amputations are thus reversed, depends upon several considerations. We are to take into account the difference in the circumstances under which the injury has been received, as well as the difference in the character and extent of the injury itself. Wounds received in battle are not often so depressing as those from heavy machinery, railways, or wagons, from which primary amputations are oftenest among civilians. The citizen is apt to regard his misfortune as an unmitigated calamity, and has none of the enthusiasm, inspired by patriotism, so warm in the soldier's bosom, to enable him to meet the rapidly recurring shock of a primary amputation. No doubt many limbs are quickly taken off on the field which, in time of peace, an effort would be made to save. Thus we have an operation successful, primarily, that in civil practice might have been successful secondarily.

There is another reflection just here that has occurred to me, and so far as I know, it has not before been mentioned. It is supposed that none but vigorous and able-bodied men go into battle, and hence they furnish good material; they reäct well. Now, among citizens the cases must be taken as they come, from all classes and ages, and both sexes of people; many of them representing the laboring and poorer classes, with constitutional powers already impaired by toil and destitution; not a few of them coming from among the debauched and dissipated, who bear an unfortunate relation to the exigencies of the occasion. It should also be remembered that a soldier subjected to exposure, to rough transportation, and to breathing the contaminated atmosphere of crowded wards, has his chances of recovery seriously jeopardized by a secondary operation. Under such conditions the danger from septicæmia, and from fevers of a typhoid type, will usually be much greater than in private practice.

I have said that *time* influenced not only the fatality of amputations, but also entered largely as an element in determining the particular or immediate cause of death. Now, primary amputations are most frequently fatal from shock, hæmorrhage,

and exhaustion, although I do not mean to say that death from secondary causes of a low type is by no means very rare. Secondary amputations oftenest carry off the patient through the supervention of morbid conditions of an asthenic type. Amongst these secondary affections may be mentioned gangrene, phlebitis, secondary hæmorrhage, septicæmia, and erysipelas, or death may result from some form of visceral inflammation or congestion, as pneumonia, pleurisy, or diarrhœa. These visceral disturbances not unfrequently complicate local mischief in the part; for instance, we find an unhealthy condition of the stump complicated with suppurative pneumonia claiming a large share of victims. On this point I am constrained to quote the opinion of Professor Hamilton, of New York, whose views, for many reasons, are deserving of much attention. He fully admits the importance of primary amputations im military practice, but says: "In civil practice secondary amputations have been claimed to be more successful than primary, but the observations of Lidell have rendered this doubtful. It is probable that if attention was directed only to those amputations made in civil practice for traumatic injuries, the result would be found to be favorable to primary operations."

It may seem almost unnecessary to state that the after-treatment has much to do with the success of an amputation. The purity and temperature of the atmosphere, mental depression, diet, dressings, the prevalence of epidemics, all exert a more or less powerful influence on the issue. Through inattention to these matters, it is thought many lives are lost that might, under more auspicious circumstances, have been saved. Many patients in the crowded wards of large city hospitals no doubt perish from causes that would not have obtained in private practice, especially in the country. I am not considering the modes of dressing stumps, but their morbid conditions. Pathology is so suggestive of treatment that it is hard to resist the temptation to dwell upon it; yet, I will do no more in that way than say something of what is termed the antiseptic treatment

of wounds and the theory on which it is based. Mr. Lister is the chief advocate of this new doctrine and practice, and under the prestige of his great name, it has attained a position and success that renders it worthy of serious consideration. Founded upon the labors of Pasteur, it proposes in Lister's own words, "that putrefaction is not occasioned by the chemical action of oxygen or any other gas, but it is a species of fermentation, analogous to that of sugar under the influence of the growing yeast plant, being brought about by the development of microscopical organisms." Fully impressed with the absolute correctness of this theory, the next step was to procure the obstruction of these organisms, by such means as would not do too much violence to the wounded textures. "Carbolic acid," to quote again from Lister, "happened to be the first agent that I employed on this principle, and it still appears to be the most useful for the purpose; it has also the advantage of being a local anæsthetic." The advantages which are claimed for the carbolic spray in operating, and the antiseptic ligatures and dressings, are very great; no less, indeed, than almost absolute security against the disasters of pyæmia, gangrene, erysipelas, and profuse suppuration. The practice, it can not be denied, has been eminently successful, and has taken a strong hold on the professional mind; yet, it can not be said that the germ theory on which it is founded is by any means established. In other words, the theory is one thing, the practice another. It is not easy to determine how much of the success reported by this plan is due to its specific character, and how much to the care and close personal attention of the operator, which it requires. Let the argument be as it may concerning the *theory*, the *fact* remains that the practice grounded upon it, has achieved a most admirable success. No enumeration of this sort could be considered complete that did not include some mention, however cursory, of the diseases arising after operation, and which complicate more or less the result. Chief amongst these morbid conditions may be placed the so-called pyæmia. Its phenomena, even in the light of our ad-

vanced pathology, are in some respects still enigmatical; and the most acceptable solution of them that we are able to reach, is at best unsatisfactory. What we do know certainly and unfortunately, is, that it is the immediate cause of a fearful percentage of the fatal terminations. The "Guy's Hospital Reports" show that the malady claims as its subjects 42 per cent. of the fatal cases, and one-tenth of all amputations. These reports also prove, so far as they go, that the disease is almost twice as fatal after operations of expediency as after those for disease or primary amputations, and that it is least fatal after secondary amputations.

I have used the term pyæmia in the sense of ichorrhæmia or septicæmia. It is difficult to dispense with the nomenclature altogether, when we meet it in almost every page of even very recent systematic works. But the fact is that there can really be no such condition as poison from pus in the blood. In the first place, as has been experimentally shown, laudable pus does not, in the circulation, give rise to these pathological phenomena. Again, the divided veins being deprived of the propelling force, the *vis a tergo*, are utterly incapable of conveying the pus corpuscles into the systemic or capillary round. Finally, it is impossible that normal pus corpuscles could move through the capillaries of the lymphatics. If we allow that pus, as such, could enter the circulation, and that it but represents the colorless blood corpuscles, it would do no more than contribute to the formation of initial thrombi. Now, these of necessity must become disintegrated, and be borne onward through the heart into the lungs before a fatal issue could occur. All this, of course, requires more or less time, while too often we scarcely notice the accession of unfavorable symptoms before the end has arrived. Yet, we have such eminent authority as Prof. Gross, declaring, "I have myself no doubt whatever that pus, as pus, may enter the blood, and give rise to septic changes in that fluid, or systemic infection, or literally pyæmia." Perhaps the truest explanation of this pathology is that it originates in the absorption or inhalation, of putrid or

broken-down inflammatory products, and there seems no better name for it than ichorrhæmia, septicæmia, or, in a word, *blood poisoning*.

That the septic matter may exist as a ferment in the atmosphere and produce its effects through the lungs, has been shown by the occurrence of the disease in those who had no suppurating lesion or any wound whatever. That it may be brought on by the absorption of putrid or fluid pus through abraded surfaces, is shown too often in hospital reports, and receives additional confirmation from the success of the antiseptic dressings. Whatever its origin, the symptoms of the trouble, although varying in degree, are seldom equivocal. The sudden occurrence of rigors, the excessive reäction, the varying temperature, the exhausting diaphoresis, the fetid profuse diarrhœa, the brown tongue and delirium, all point to the disastrous result impending. Death may close the scene speedily, or the disorder assuming a typhoid type, may spare its victim for days or weeks. What is remarkable, and, I think, pathognomonic, the temperature at the commencement of the *chill* constantly and rapidly rises, being highest at its termination. In a stump which does not heal kindly, that is unusually tender or painful, in which the discharge is profuse not only, but thin, foul, sanious, bloody or ichorous with the supervention of more or less constitutional dyscrasia, we may justly conclude that our formidable enemy is unmasked. The pathology is sufficiently suggestive of the treatment. Patients who have lost much blood are not apt to make good recoveries. Hæmorrhage may indeed occur in operation to such an extent as to bring on fatal collapse, or such may be the result of secondary hæmorrhage; but this does not often happen. The chief danger to be feared is not the loss of blood in itself considered, so much as the morbid conditions to which it may give rise. Such patients, as I have said, rally slowly, and often die within a period more or less variable, through the intervention of some asthenic visceral complication, by hæmorrhagic or irritative fever, or by low and erysipelatous inflammation. The danger of hæmorrhage will

be plain enough when we reflect that death may ensue from shock or exhaustion when no local or constitutional mischief is discoverable. I am sure that the surgeon who underestimates the importance of shock as an element of disease after amputation commits a grave mistake; not only does it predispose to a vitiation of the secretions and reparative products, but is itself the direct cause of sudden death. Hæmorrhage may occur immediately after amputation on account of badly applied ligatures, or from vessels that escaped notice at the time the operation was done.

Its occurrence at a later period is far oftener fatal, indicating, as it does, some morbid condition of the wound or system, most commonly we may say that it is associated with a typhoid state, by which the desirable formation of plastic matter is prevented. It should be remembered that in some constitutions there exists a great tendency, at times uncontrollable, to bleeding even from trivial wounds, the hæmorrhagic diathesis. Its immediate causes are deficiency in the coägulability of the blood and want of contractility in its capillaries. Of its remote causes very little, if anything positive is known. It is very often hereditary; what is remarkable in this relation is that the trouble is the sequence of trifling wounds, and has not been known to complicate any serious surgical procedure. It remains for me to say something of Hospital gangrene. All allow that the disease is contagious, and most surgeons admit that it is infectious. Yet these are not its only origins, as it is but too frequently found to arise *de novo*; under such circumstances it is held to be dependent upon the existence of putrefactive material in the atmosphere, the result in most instances of decomposed inflammatory products. At times it makes its appearance in institutions well located, and where the best sanitary regulations are enforced. This fact was observed on several occasions during our late war. Yet, of course, it most commonly prevails in wards overcrowded with suppurating wounds, and poorly ventilated. There are no tissues that it does not invade; the veins and arteries hold out longest against its ravages,

and hence the trouble from hæmorrhage is not often so disastrous as might at first be thought or supposed, although it is not infrequently of an alarming nature. That the disease may be propagated by the direct contact of the *materies morbi* has been seen so many times, that no doubt of the fact can now remain. And that it owes its origin in many cases, to a species of blood poisoning, depending on a foul and infected atmosphere operating on a depraved and depressed system, is also very true. Shock and exhaustion are predisposing causes of the malady as they are of so many others, in which nervous lesion of one sort or another is a prominent symptom. The extent and seat of the injury, the diathesis, the habit of constitution and life may also be placed in the same class. When the disorder arises from the direct contact of putrid, poisonous or gangrenous material with a stump, the local symptoms will be first developed. On the contrary, should its advent depend upon causes that affect the system generally, the constitutional disturbance will have priority. Whatever may be the nature of the systemic manifestations in the beginning, they soon take on a strictly asthenic character. The pulse will be found too frequent, feeble and irritable, the patient becomes desponding and weak, the tongue dry and brownish, and the pain sometimes so great as to deny the sufferer food or rest. Delirium may come on from the extreme violence of the morbid action. Most of these phenomena are very similiar to those noticed in irritative, septic or erysipelatous fevers. Besides the local symptoms in the wound, the nearest lymphatic glands soon become involved, by the deposition in them of the morbid material. They are always exceedingly painful and irritable, thus adding in no inconsiderable degree to the local and general distress. The rapidity of gangrenous action is at times appalling, causing the stump to melt away. It then moves on up the limb with frightful haste, the tissues literally caving in as it advances. The unhappy patient may die from hæmorrhage, or beginning in the nervous system, death may come on with delirium coma, or convulsions. The individual may die because all

the great sources of life are so contaminated that he can no longer live. When large masses of tissue give way, and slough, we may be most apprehensive of hæmorrhage, for then it is that the vessels become obnoxious to the general destruction. I do not believe as I have before intimated, that hospital gangrene, or sloughing phagædena is any less a systemic than local diseaes. It is true that the irritation spreading from the local nidus is at times great enough to destroy the patient, but then it must not be forgotten that we have suspension or perversion of glandular action, hectic and other characteristics of low and diffuse inflammations. The most important part of the treatment is the studious use of such measures as will best promote the prophylaxis. When the disease has made its appearance nothing is to be left undone to prevent its spread. Patients should be isolated, and every attention given to ventilation, cleanliness and dressings. No precautions based upon any theory of the origin of the scourge should be disregarded.

The true pathology of the diffuse, low or erysipelatous inflammations, so fatal in amputations, has not been very clearly made out. In their essential natures they are not very unlike. They are all clearly allied, and are, under whatever name, evidently constitutional or blood diseases. They all seem to depend on some peculiar crasis of the blood to which the local manifestation is secondary. Erysipelas appears to exert the greatest malignancy in direct antagonism to the plastic or reparative inflammation; hence it is much more common in recent wounds than in old ones. The fever, although at first sthenic, speedily runs into the asthenic or irritative form. In the graver cases we have the ordinary typhoid symptoms, quick, feeble pulse, brown tongue, and muttering delirium. It is truly an affection of debility. The deposition of plastic matter in a stump is a highly conservative process, and has a tendency to limit inflammatory action. But when this power is inadequatein the part or system, the erysipelas may spread itself unchecked along the surface it invades. The tendency that exists towards suppuration and sloughing of the parts is

only another proof of the really asthenic nature of the disease. The predisposing causes of the disease are numerous. In a general way, we may say anything that depresses the vital powers. Neglect of proper sanitary regulations, intemperance, bad food, and vicious habits generally. Many functional disorders exert a strong predisposing influence, particularly diabetes and those diseases of the kidneys attended with albuminuria. Persons of a gross and full habit are so predisposed, whilst the blood degeneration, which results from malignant disease, renders such persons very liable to the affection. The most important, and by far the most common exciting cause of the disease, is wounds, and it is mostly recent wounds that are attacked, those about the head or hands being most apt to take on the disorder. Nor is it necessary that injuries should be extensive. When a predisposing diathesis or condition of constitution is present, the disease manifests itself on very slight provocation. Erysipelas may and does prevail in its most fatal form as an epidemic; that it is also contagious appears now to rest upon such an amount of evidence as to leave no room for dispute. "Erysipelas," says Erichsen, "may not only spread in this way from patient to patient, but any diffuse inflammation, as phlebitis, inflammation of the absorbents, low or puerperal peritonitis, and pyæmia may give rise to external erysipelas, and in its turn be occasioned by it." A strong argument in favor of the allied nature of all these affections.

It is held that an outbreak of erysipelas could be caused at any time by overcrowding those suffering from fresh wounds, and by poor ventilation. Hence the absolute necessity here, as in kindred maladies, for a strict separation of patients so affected from those who are not its subjects, and for the enforcement of rigid precautions of a hygienic sort. Various affections of internal organs frequently supervene upon and hasten death after amputations. Most of them exist as complications of or are intimately connected with maladies already mentioned. The lungs are apt to become so involved, or we may have the patient taken off by a pneumonia, the result of hypostatic congestion.

Necrosis of a stump, it is laid down, is not often fatal. It may occur as the result of splintering the bone, of wounding the endosteum, or of jarring, caused by the saw. If in these cases osteo-myelitis sets up in the remaining portion of the shaft, loss of vitality and necrosis ensue. A fistulous opening will lead down to the dying bone. Exfoliation is said to happen three or four months after operation, when the sequestrum may be removed, in the shape of a complete ring, irregularly prolonged at its upper end. The stump now becomes healed, hard, and firm. The disease is most apt to occur in persons of feeble and cachectic constitutions. Not unfrequently it will be found that the bone, which so readily takes on morbid action, was previously more or less diseased. There are several other affections of stumps, all of them impairing the general health in a greater or less degree, and some of them, as neuralgia, exceedingly painful and annoying; but as of themselves, they seldom or never terminate fatally, they can not be considered as affecting to any serious extent the mortality of amputations.

ECLECTIC DEPARTMENT.

"Carpere et colligere."

Art. I.—The Medical Year 1874.

Medicine is not only a year older since our last summary, but a year wiser and a year more effective in its knowledge of disease and of methods for controlling it.

In Physiology, one of the principal works that have been published since the close of last year is Dr. Klein's memoir on the Lymphatic System, in which the distribution of the lymphatics as well as the arrangement of the epithelium on the serous membranes is very fully considered; the general result arrived at being that the serous membranes are to be regarded as unraveled lymphatic glands, and, as such, play an important

part in the formation of the white corpuscles of the blood. Drs. Foster and Balfour have just published a work that has long been needed—"The Elements of Embryology"—in which the process of development is described, in a singularly lucid and intelligible manner, from the earliest period in the fowl, and which constitutes the first part of a larger work; on the same subject, embracing the history of development in other animals. Dr. B. has also done a good piece of work in following the developing of the dog-fish and its allies.

Mr. Parker has continued his elaborate account of the development of the skull in his lectures delivered at the Royal College of Surgeons. Arnold, Gasser, Rauber, Mihalkovics, Sernoff, von Török, Merkel, and many others, have devoted themselves to the elucidation of the process of development of various special parts or organs, as the eye, ear, pituitary body, testis, etc. Mr. St. George Mivart has published a brief, but useful account of the Anatomy of the Frog. Quite recently, Mr. Barker has published a valuable translation of Frey's Histology. A very interesting little work has been issued in the International Scientific Series, by M. Marey, on "Animal Mechanism and Aerial Locomotion," in which great ingenuity is displayed in the application of recording apparatus to the registration of the movements of animals, both in aerial and in terrestrial locomotion. To the same series Dr. Draper, of New York, has contributed a volume that will be read with interest, on the "History of the Conflict between Religion and Science," in which the learned author, who is well known for his excellent treatise on Human Physiology, has endeavored to present a clear and impartial statement of the views and acts of the two contending parties. There is also a third, consisting of a translation of Oscar Schmidt's Doctrine of descent and Darwinism. A popular physiology is contained in Hinton's "Physiology for Practical Use." A complete account of the Physiology of Food and Dietetics has been written by Dr. Pavy. Dr. Carpenter has developed two or three chapters on Mental Physiology contained in the earlier editions

of his Physiology, which have been excluded from the later ones for want of space, into a goodly volume, written with his usual clearness and intelligence.

Amongst foreign works may be mentioned the "History of Creation" and the "Development of Man," by Haeckel, the former of which has been translated into English by Lankester, and the latter into French. Herrman has published a fifth edition of his excellent work on Physiology, which is now, we believe, in course of translation into English. Dr. Gustav Le Bon, in a large volume entitled "La Vie," remarkably well illustrated, and M. Coyteux, in another, the "Etudes sur la Physiologie," have both treated fully of human physiology. Hitzig has collected his observations and inquiries into the functions of the brain into one volume, which is worthy of careful perusal. Though, perhaps, scarcely capable of being included under the head of Anatomy and Physiology, we must not omit to chronicle the first International Congress of Orientalists, which was held at the Royal Institution in London, in September, and which, under the presidentship of Dr. Birch, was the occasion of several excellent addresses, amongst which those of Max Müller, the President, and Professor Owen, deserve special mention. Prof. Rutherford has been appointed to the Edinburgh Chair of Physiology, and carries with him the good wishes of his late colleagues in King's College, and of his friends in London. We trust that still increasing numbers of students in attendance upon his classes will testify to the ability with which he conducts them. A large number of separate contributions have been made up by individual observers, amongst which it is difficult to select any of preëminent value. Braun has repeated Hitzig's experiments on the excitability of the surface of the cerebrum by weak electrical currents, and whilst generally confirming his experiments, and those of Ferrier, adds this novel point, that there are several cases in which there appear to be two centres on the surface of the hemispheres for the same set of muscles, as, for instance, those of the neck. He also finds that, after shaving off the gray mat-

ter from a given spot, the groups of muscles can be made to contract if the current be applied to the cut surface of the white substance as before, showing that the nerve-fibres really arise from the gray matter, whilst, if the white substance be divided, all manifestation of nervous excitation ceases. Burdon Sanderson has also made experiments upon this point, and has shown that there are points in the corpus striatum of the same side which correspond to those of the same hemisphere. Dr. Ferrier considers that in Dr. Sanderson's experiments only a medullary corresponding to the cortical centre is removed. Nothnagel, from experiments on the thalami optici, has come to the conclusion that they have no relation to voluntary muscular movements, nor to the general sensibility of the skin, but that they are immediately connected with the muscular sense. It is pleasant and encouraging, in connection with the subject of Physiology, to call to mind the meeting of the Russian Association for the Advancement of Natural Sciences, held at Kasan, a flourishing city in the very centre of European Russia, on the Volga, which possesses a good university. Physiological subjects figured largely in the discussions. We may mention especially Dr. A. Schakowsky's paper on the Amount of Fat in Human Milk, averaging 3 per cent., and the striking reduction in the amount produced by a strictly vegetable diet, till it fell to 0.8 per cent.; Prof. Kowalewsky's paper on the Mechanics of the Movements of the Bile; and the paper of Dr. A. Troitzky, of Kasan, on a method of estimating the rapidity with which a stimulus is propagated under different temperatures, and with various strength of exciting currents. The maximum rapidity of propagation of stimulus is between 68° and 50° F.

The experience of the year has shown that Esmarch's plan of preventing hæmorrhage is capable of general application with advantage, and it has been almost universally adopted. Dittel's elastic ligature for the treatment of fistula in ano has been lately highly praised by Mr. Allingham, who has treated a number of cases with it satisfactorily. An interesting cor-

respondence took place in our columns in January as to the credit of priority in the use of the elastic bandage and of the elastic ligature. According to our correspondent, Dr. Gesualdo Clementi, of Naples, Dr. Grandesso Silvestri, of Vicenza, used the elastic ligature in 1862; and he and Professor Vanzetti, of Padua, together used and described the elastic bandage very much in the same way as Esmarch. The subject of bloodless surgery, by means of the galvanic cautery, has been discussed at length by Mr. Bryant, and the introduction of a new constant battery with carbon and bichromate of potash for its elements seems to remove one of the difficulties hitherto in the way of the general adoption of the plan. In connection with the subject of Pyæmia, we may refer to Mr. Lister's practice, as reported upon by Mr. Gamgee, which serves to illustrate the proverbially diverse effect produced by the same series of phenomena in different minds. The treatment of Syphilis was the subject of an address to the Hunterian Society by Mr. Jonathan Hutchinson, who proved, we imagine, to the satisfaction of all candid inquirers, that mercury is the remedy for that loathsome disorder. The subcutaneous injection of mercury was the subject of an interesting communication by Mr. Cullingworth, but the method is one which has hitherto found little favor in this country. Sir William Fergusson has introduced a modification of the method of operating on cleft hard palate, which seems to promise well; and the same eminent surgeon was able to relieve public and private anxiety as to the identity of Livingstone's remains by the recognition of the united fracture of the humerus. Mr. Teale has called attention to the operation of ovariotomy in exceptional cases; Mr. John Wood has contributed to the literature of thoracentesis, and Mr. Reginald Harrison to that of puncture of the bladder by the aspirator. The recent lecture on American Surgery by Mr. Erichsen has set before us many points of interest in connection with the surgery and hospitals of the United States; and Dr. Buchanan's introductory address served to illustrate the activity of our northern brethern. Amongst the feats of surgery for the year, we may mention Billroth's total extirpation of the larynx and epiglottis

for carcinoma—the second operation of the kind which he has performed; also his second complete removal of the thyroid gland, and the extirpation of a fibro-cystic tumor of the uterus, weighing sixteen pounds, with the uterus and its appendages, followed by recovery, by Dr. E. H. Trenholme, of Montreal. The "Lancet" of July 25th sets forth that Dr. Henry Harland, of Wadhurst, Sussex, had extricated a Waterloo bullet from the hand of James Jenner, aged eighty-three. The said bullet had been in the veteran's hand fifty-nine years, and had become incovenient to him at his work as gardener! Our pages have contained many illustrations of the happy use of the aspirator in tapping the pericardium and other cavities, and Dr. Maclean speaks of the pus let out of livers at Netley by this instrument in a summer as measuring hundreds of ounces.

Of papers of importance at the Medico-Chirurgical Society, those by Dr. Cuningham on Recent Experience of Cholera in India, and by Surgeon A. Hall on the use of Chloral subcutaneously injected in that disease; by Mr. Mahomed on the Prealbuminuric Stage of Bright's Disease; by Dr. George Johnson on the Laryngeal Symptoms produced by Pressure on the Vagus and Recurrent Nerves,—may be noted. Much valuable matter has been brought forward at the Medical Society, which shows no signs of decay; and we must not omit to mention the able Lettsomian lectures delivered before the Society by Dr. Broadbent, on the subject of Syphilitic Affections of the Nervous System. The most important papers at the Obstetrical Society have been those on Puerperal Thrombosis, by Dr. Playfair, and on the Relations of Flexion and Congestion of the Uterus, by Dr. John Williams. We may note also a discussion at a special meeting on the admission of ladies as members of the Society, which resulted in a decision adverse to the proposal.

The summer months brought the usual pleasant gatherings of scientific societies, in which not a few of our brethern seem to find their holiday. The meeting of the British Medical

Association at Norwich was large and successful. The addresses were of a high character, and the Society of the old city was full of worth and hospitality. Amongst the distinguished foreigners was M. Magnan, who essayed to illustrate on dogs the different action of alchohol and absinthe, and in so doing involved some of the spectators in a criminal prosecution, at the instigation of the Society for the Prevention of Cruelty to Animals.

The meeting of the British Association at Belfast was presided over by Professor Tyndall, who lauded matter in such terms as to offend the sensitive religious minds of the Irish. He indicated that he saw in matter promise and the potency of all things It is only fair to add that he has since confessed that when he looks abroad on the beauty of the universe, he can not resist the feeling that there must be some Being superior to it and more familiar with it than he himself. And so we think. We have great regard for Professor Tyndall and his colleagues of the British Association; but we trust that there is a Being somewhere in the wide universe to whom even the knowledge of our wisest *savans* appears very elementary. Professor Huxley's address in Physiology on the Hypothesis that Animals are Automata, and Dr. Hooker's on the Carnivorous Habits of Plants, Professor Redfren's paper on the Effects of Ozone on the Animal Economy, Professor Cleland's on the Morphology of the Brain and the Function of Hearing, Sir Duncan Gibb's case of an old woman of 111, and other communications are full of scientific or human interest. The Social Science Congress met in Glasgow. One of the best features of the meeting was a very able address from the chair of the Public Health section by Dr. Lyon Playfair. During the sitting of the British Association, congratulation and friendly sentiments were exchanged with the French Association for the Advancement of Science which met at Lille. The Medical section of the French meeting was well attended, and the scientific work of it was good. The Public Analysts are now becoming an important power in the community. They held a

meeting at Cannon-Street Hotel on Friday, August 7th, and in several resolutions showed their mind on questions involved in the working of the Adulteration Act.

The General Medical Council had a long and important sitting in the very hot days of July, from the 9th to the 18th. The business was opened by a very perfect address from Dr. Paget, the retiring President. In the pith of the report of the visitors there is claimed a terrible defect in preliminary education.

Several cases of rheumatic fever have been published, in which almost every conceivable remedy has been given with varying success. The acid treatment and the alkaline treatment, quinine, iron, and propylamin have all been shown to be valuable, or at least not hurtful, in some cases of acute articular rheumatism. The value, in epilepsy, of bromide of potassium in large doses frequently repeated, was illustrated in a patient under the care of Dr. Ransome, of the Nottingham General Hospital. From Charing-cross Hospital we published a case showing the value of chloroform in chorea, and from the Royal United Hospital, Bath, another showing the value of chloral hydrate in the same affection. Lastly, we lately recorded a case from University College Hospital in which a child was shown to have suffered from an acne-like skin eruption, shrewdly traced by Dr. Tilbury Fox to taking milk from its mother, who was under the influence of bromide of potassium.

In Therapeutics, interest still centres to a very large extent in substances which, as a matter of fact, affect the nervous system, such as alcohol, chloral, belladonna, physostigma, phosphorus, etc. The value of alcohol as a therapeutic agent is still a much contested point. But we have lately had to remark on the great care and moderation with which it is prescribed by the present leaders of medical practice. The care with which a spirit ration was served out, and its effects watched, in the Ashantee war, made the subject very interesting. To say the least, the teetotalers sustained in that warfare a creditable amount of health, and in sickness showed a creditable amount of recuperative power. The Gold Coast campaign

may be held to have proved, in the words of Dr. Parkes, that the rum ration should not be given in greater quantities than two ounces and a half per man daily, and that the time for giving it is not before or during, but after a march. We may hope that in future the spirit-ration will be, as it was here, an extra to be given when deemed expedient by those best able to judge of circumstances and the wants of men. That remarkable medicine physostigma stands credited, on the testimony of Dr. Crichton Browne, at the Medical Society of London, with having cured two cases of general paralysis. Supposing there to have been no error of diagnosis, and no misconstruction of the relation of events in these cases, we should say that this is the most remarkable therapeutical achievement recorded in the year—much more remarkable than the several cases of tetanus apparently cured by chloral. The application of the curative powers of this latter medicine become multiplied. Unfortunately the use of the drug as a tippling agent also increases. Several cases of poisoning by it have occurred. Amongst the purposes for which it is recommended, with some show of reason, is as an anæsthetic in labor, and as a remedy, hypodermically injected, in cholera. In two or three cases of exophthalmic goitre, under the care of Dr. R. T. Smith, very great relief and advantage were obtained by the employment of belladonna. The question of the use of the cold bath in typhoid fever has been raised by an amateur therapeutist in the "Times;" but there has been no important addition to our knowledge of its value. In the serious epidemic of typhoid at Lyons it was used extensively, but with rather injurious results in the production of congestion, etc., and a correspondingly high rate of mortality. The bath used seemed to be at too low a temperature—namely, 68° F., and the use of it was not sufficiently restricted to cases of hyperpyrexia. In November, Dr. Clifford Albutt, of Leeds, discussed the mode of death in the early days of scarlatina, and gave proof—first, of the hyperpyrexia as a cause of death; secondly, of the efficiency of cool bathing in averting the tendency to death. The use of

ipecacuanha in the form of spray for cases of winter cough and bronchitic asthma is considered by Dr. Ringer.

Dr. Spencer Cobbold has just finished an account of cases illustrative of the treatment of tapeworm, in which he shows at once the Protean effects of this intestinal guest, and the efficacy of discriminate treatment. He evidently revels in the possession of nineteen tapeworm heads from eighteen patients, not only as the guarantee of complete cure, but as a rich accession to his cabinet specimens.

Although the closing year is not likely to be remembered as one in which crime was less in amount than usual, there has, nevertheless, been an absence of crime of a sensational order. Public attention has not been roused by any villainous or subtle atrocity, and medical jurists have not been called upon to unravel any startling mysteries. The great question of identity involved in the Tichborne trial has been settled, and perhaps we may go so far as to say that the Lord Chief Justice has originated a new principle of identification by his axiom that however closely two persons may resemble each other anatomically, yet "no two persons ever were alike within." Certain it is that his masterly dissection of the inward Orton, and his comparison of it with the inward Tichborne, served to carry conviction, when scars, thumbs, ears, twitchings, brown marks, and peculiarities had merely tended to make confusion worse confounded. One of the most important advances in forensic medicine has been made by Dr. Richardson, of Philadelphia, who, by applying a micrometer and the highest powers of the microscope, has shown that a distinctly recognizable difference exists in the size of the blood-cells of man and the other mammalia.

The science of toxicology is threatened with a severe shock from an unexpected source. The practice of cremation has been strongly advocated, and should it come into vogue there will be, of course, an end to "exhumation by order of the coroner." Civil cases involving medical questions have not been numerous. Payment of a life policy has been refused on

the ground that material information as to the habits of the assured was withheld, and although a verdict was originally obtained for the plaintiff, the insurance company obtained a rule for a new trial. The case of Simpson vs. Davey was one of a peculiar and distressing nature, and has roused the sympathy of the whole Profession. Dr. Davey has had to pay £500 damages (besides law expenses) because, having unfortunately contracted syphilis at a midwifery case, and having affected with it another patient (Mrs. Simpson), and, further having undertaken to treat Mrs. Simpson free of charge till she was well, he failed to fulfill his contract. We would particularly remind our readers that Dr. Davey has suffered, not on the ground of having infected a patient, but merely on the ordinary ground of non-fulfillment of a contract.

The year will be remarkable in epidemiological annals, first, for the reäppearance of plague in no less than three different localities of Asia and Africa; and, next (we may more reasonably hope), for the cessation of the long-continued prevalence of cholera in Europe. Early in the present year plague broke out in Mesopotamia, on the lower Euphrates; somewhat later it appeared in the Regency of Tripoli, district of Bengazi, North Africa; and still a little later in Western Arabia. The scene of the outbreak in Mesopotamia is memorable in ancient history as being within the confines of Babylonia, not far distant from the ruins of the great city. Here, among the Afij Arabs, who occupy the first of the great marshes which exist on the east bank of the river, and of which a series extends to the junction of the Euphrates with the Tigris, the disease appeared. Spreading from the marshes, it extended along both banks of the river, attacking the different towns and villages as high as Hiliah. Traveling westwards also, it passed the marshes of Hindieh, on the west bank of the river, the scene of the outbreak of plague in 1867, and attacked the two cities, sacred to the Shiite Mahomedans, of Meshed Ali (Nedjef) and Meshed Hussein (Kerbela) on the border of the great Arabian desert. It is estimated that this outbreak carried off 4000 per-

sons out of a population of 90,000. The outbreak of plague in North Africa was first recognized at Merdj, a village twenty hours distant from Bengazi. It is stated to have appeared first among a Bedouin tribe encamped near the village, then to have extended to the village, and to have subsequently spread among the tribes inhabiting the district. Here the outbreak was preceded by and occurred at a time of famine, and when the country about Merdj had been converted into a vast marsh by protracted rain. A French physician, Dr. Laval, unfortunately contracted plague in investigating this occurrence, and died from the disease. The outbreak is now reported to have ceased, but the loss of life it has caused is not yet known. The district of Bengazi was affected with plague in 1851. The scene of the outbreak of the plague in Western Arabia is in the mountainous Assyr district, North Yemen. Here also, it is stated, in a recent report, that the disease is at an end. This outbreak would seem, so far as is yet known, to have been very circumscribed, but of its nature no doubt appears to be entertained. Plague, it is said, had not been known in Yemen since 1816 until this appearance.

The probable cessation of cholera on the Continent relieves Europe from an incubus which has been weighing heavily upon it for ten years. The disease has been uninterruptedly present in Europe ever since its extension from Egypt to the southern coast of the Continent in 1865.

Port Sanitary Authorities are increasing in number and importance, and their influence in checking the importation and perpetuation of epidemic diseases is being acknowledged and appreciated. The systematic inspection of vessels immediately after arrival, the removal and isolation of the sick, the examination of the drinking water, the closet accommodation and state of bilges, the disinfection of the clothing, the inspection of foul cargoes, and other miscellaneous duties, are found to be within the scope of work of a port medical officer. At the beginning of the current month a large body of Russian and German emigrants imported small-pox in to the Thames, and,

although the sick and suspected were at once separated from the healthy, the latter proved to be infected, and took the disease to Liverpool, where, however, it was successfully circumvented by the local authorities. The half-yearly reports issued by the Corporation of London, as sanitary authority of the port, show the large amount of sanitary work that has to be done on this as on other rivers. Scurvy has exhibited a slight tendency to increase in our mercantile marine. Seven official inquiries have been held by the medical officer of the Board of Trade during the year on account of outbreaks of this disease; and in one of these the master of the ship was prosecuted and fined for non-compliance with the sanitary clauses of the Merchant Shipping Act. Some progress has been made in the ventilation of ships of all classes; and much attention has been directed to this important subject, chiefly with reference to ironclads and to school ships.

The Sanitary Commission during the year has issued twenty-one reports—viz., four on the causes of certain outbreaks of fever, six on the drainage and general sanitary condition of important towns and districts, and eleven on sanitary matters of general interest, such as inquiries into the condition of the dwellings of the poor, and the influence of chemical manufactures on health, etc. The outbreak of typhoid fever at Cambridge was the subject of our first report. The disease appeared late in the autumn of last year, and, after slowly making its way along a certain line of drainage, culminated in a severe outbreak in the new buildings of Cains College. We attributed the spread of disease to the abominable condition of the town drains and to the percolatfon of sewage matter into the wells; and suggested that the cause of the outbreak at Caius College would be found in some defect in the main drain, by which contaminated excretory matter or sewer gas had found access to the College buildings. Dr. Buchanan some weeks later found that a portion of fæcal matter had been sucked up from this drain, and had contaminated the water-supply of that part of the College where the cases occurred. Our inquiry

into the health and management of the children at the Brentford Union Work-house led us to the conclusion that the state of our work-houses is rapidly reverting to the status quo ante bellum 1866, and served to increase a growing feeling in favor of boarding out pauper children. The new drainage-works at Brighton were the subject of a lengthy report.

Although we have no such important contribution to chronicle this year as that of Surgeon Lewis' very remarkable discovery of the presence of filaria circulating in the human blood, the members of the Indian and British medical services have contributed their quota to the scientific work of the year. The Ninth Annual Report of the Sanitary Commissioner with the Government of India contains a remarkable paper, illustrated by some fifty-nine colored drawings, on the floating bodies in the air of that country, by Dr. D. D. Cunningham, of the Indian Medical Service, who has been employed under Government, in conjunction with Dr. Lewis, of the British army, in the investigation of cholera in India. Dr. Cunningham has also, in addition, made many miscellaneous æroscopic observations in connection with the presence, development, and influence of bacteroid and other bodies found in the air of certain localities, and in that of sewers, from which he draws many interesting conclusions, one of which is that no connection can be traced between the number of bacteria, spores, etc., present in the air, and the occurrence of disease, nor between the presence or abundance of any special form or forms of cells, and the prevalence of diarrhœa, dysentery, cholera, ague, etc. Dr. Vandyke Carter has prosecuted and published his researches into the affection known as mycetoma, or fungus-disease of India. A Commission composed of the medical authorities at Calcutta have instituted an exhaustive series of experiments into the nature and effects of Indian snake-poison, as compared with that of Australian snakes—the Australian tiger-snake, for example,—which have established the correctness of the results previously arrived at by Dr. Fayrer, and proved the inefficacy of the ammonia treatment of snake-bite.

The Ashantee war gave several naval medical officers opportunities of distinguishing themselves, and these received their rewards in early and well-deserved promotion.

In surgery we have to note the issue of a third edition of Dr. Pirrie's book, and a work embodying the observations and lectures of Mr. Cæsar Hawkins. We must not omit to mention with satisfaction the papers in the "Lancet" on Hospital Construction, by Dr. Sutherland and Captain Douglas Galton. Our tribute to the merit of Dr. Barne's work on the Clinical History of the Medical and Surgical Diseases of Women has been fully endorsed by the Profession. A new edition of Meigs' and Pepper's Diseases of Children, and Dr. West's well-known work on the same subject, deserve a passing word. We reviewed at much length a number of works on the Anatomy and Diseases of the Ear, by Politzer, Hinton, Turnbull, Allen, and others. A new edition of Dunglison's Dictionary of Medical Science, large and valuable as it undoubtedly is, would still be benefited by careful revision. In Mental Physiology Dr. Carpenter's "Principles" deserves to be named as an important contribution to that subject. In Sanitary Science and Army Hygiene we have had many works in connection with the late Franco-Prussian war, Lex's and Roth's contributions, and Dr. Guy's Lectures on the Sanitary Aspects of War. Pettigrew on Animal Locomotion has excited some controversy.

The Hospital Sunday movement grows and extends everywhere. In London, auspiciously begun in 1873, it expanded in the present year, both as regards the sum raised and the number of contributing congregations.

The roll-call reveals many gaps in the professional ranks. Early in the year Mr. Wormald, senior member of St Bartholomew's surgical staff, died at a ripe age; and Mr. Thompson Dickson closed prematurely a promising career at Guy's. Dr. Forbes Winslow had not quite survived his vigorous and devoted energies in medico-psychology when he too was summoned to "the majority." Medical physics owes much to Dr. Neil Arnott, medical diagnosis to Dr. A. Kilgour, and the lim-

itation of criminal responsibility in courts of law to Dr. Winslow. The Bombay army boasts of few abler medical officers than Dr. John Maclennan, who discharged with equal promptitude and effect duties apparently diametrically opposed; but a yet severer loss than his was that of Cruveilhier, the great anatomist, physiologist, and surgeon, a worthy disciple of Dupuytren, and long one of the brightest ornaments of the great Parisian school. "Literary labor," says his compatriot and eulogist, M. Bardinet (himself just numbered with the dead), "hospital practice, patients at home and abroad, faculty engagements, lecturing, and so on, absorbed eighteen or nineteen of the twenty-four hours, and this herculean work was carried on for many years. Rarely has a man of science been so thoroughly kind and considerate to his patients; rarely have the latter more warmly reciprocated a welcome so sympathising." Truly "his works do follow him," for few anatomists of the century continue to fill a greater or more honored place on the book-shelves of the learned. About the same time England—and, indeed, the whole civilized world—began reluctantly to persuade themselves that the mightiest missionary explorer since Las Casas or Xavier had died in David Livingstone—died indomitable to the last, after a life which more than any other realized Arnauld's noble rejoinder when entreated to rest—"Rest! we shall rest through eternity!" The arrival of his mortal part on our shores enabled Sir William Fergusson to identify it by the recognition of the false joint which Livingstone had asked Sir William to examine in London some seventeen years before. The honor of a tomb in England's Walhalla, Westminster Abbey, was accorded to him; but his monument—

"ære perennius
Regalique situ Pyramidum altius,"—

will be that disenshrouded Africa with its slavery suppressed and its moral and religious darkness replaced by Christian science.

Dr. Anstie's death was the cause to us of almost domestic

grief, and threw our pages, which he had so much enriched, into mourning. We need not recount again his virtues,—

> "Since Heaven, what praise we offer to his name,
> Hath rendered too authentic by its choice."

We must here leave our attempt to exhaust the history of medical labor. We can only, as busy men, snatch fragments from the accumulating pile of the stately building of medical science and art. We should especially like to have attempted to do some justice to our foreign brethren and to our American—we were going to say—fellow-countrymen; but we will content ourselves by referring to our constant attempt to represent in our columns the points of all their scientific and practical work. Witness the Foreign Gleanings, the letters of our Paris Correspondent, and our frequent leaders on Physiological or pathological questions. As regards our American friends, what English surgeon did not feel proud as he read Mr. Erichsen's address, winding up with that accomplishment of Dr. Sayre, the removal of the head of the femur fifty-two times, bearing the same relation to Mr. Syme's excision of the elbow that the Reform Bill of 1867 bore to that of 1832. Medicine is becoming more and more an affair of public interest. "Internationalism" has no dread to suggest when it represents the discussion of sanitary questions at Vienna or physiological questions at Kasan. Be it ours in the future not only to hold high the domestic and social interests of the Profession, but also to recognize medical labors everywhere, whether applied to minute and impalpable questions in pathology, or to those great questions which affect the health and happiness of communities.—*Lancet.*

ART. II.—THE BEEF-TEA FALLACY. By A. MACKINNON, M. D., Stratford, Ont.

Many years ago, that greatest of chemists, Baron Liebig, proposed extract of meat as an agent of value in certain cases

of extreme nervous and physical exhaustion. The proposition at once set the medical world agog, and ever since it has been the custom, with practitioners generally, to prescribe extract of beef in all cases requiring a supporting treatment, and in not a few requiring no such treatment, in the full belief that the article in question was the most concentrated, and at the same time the most easily appropriated and life-giving aliment that the patient could have administered to him. The belief is general that extract of beef is the very quintessence of beef, and, as a matter of course, infinitely more nutritious than beef itself. Such being the opinions entertained, we need feel no surprise at the wide-spread custom of feeding the sick with beef-tea or extract of beef, to the exclusion, to a large extent, of other articles of diet, including beef itself. That this practice is almost universal I need not stop here to show, since the fact must be known to the most casual observer. Physicians, generally, are in the constant habit of ordering extract of beef as food, in all conditions, from enfeebled health to the most acute disease. If the patient is weak, he is at once ordered beef-tea; and if he is still sinking, he is ordered a still larger portion of beef-tea. Such is the practice, as we daily witness it, and such is the practice as seen in all civilized countries, and such will be the practice until many thousand lives more are added to those already sacrificed at the shrine of this stupendous delusion.

What would be thought of the physician who, when called to the bedside, ordered coffee for diet, and more coffee as the patient's strength failed? Of course he would be declared mad; but, I shall endeavor to show, he is only a trifle more so than the man whose reliance is on extract of beef.

To the intelligent comprehension of the question, it will be necessary to briefly inquire into three points:

1. What tissue or tissues of the human fabric more immediately concern the performance of the functions and the continuance of life?

2. What kind of food is best adapted to the production and support of such tissue?

3. Does extract of beef contain such food in due, or any proportion?

As to the first question, all science teaches us that fibrous tissue largely predominates in the higher order of animals, more especially in man. It is contained in bones, tendons, and ligaments; nerves and blood vessels are mainly composed of it; the connecting and various lining membranes are almost purely fibrous; and, lastly, the great muscular system is made up of bundles of fibres, including the heart itself, which is to the animal what the main-spring is to the watch. To enlarge here, would sound too much like demonstrating a self-evident proposition. It is only necessary to add, that every one must be impressed with the important part which fibrous tissue plays in the animal economy, and the paramount necessity of promoting its development and supplying its waste.

The second question is equally easy of solution, since science happily confirms what the experience of ages points out as the most nutritious kind of aliment. In this department of investigation, chemistry has opened up a wide field, the importance of which, to the intelligent physician, is daily becoming more and more apparent. No argument need here be advanced to show that it is from *nitrogenous* substances that muscle and the other fibrous tissues are developed, and the strength of the body maintained, since both observation and science have long ago placed these facts beyond the domain of dispute. *Non-nitrogenous* substances, therefore, do not directly impart strength or vitality to the system, although useful enough as auxiliaries. It is also admitted on all hands that next to milk and raw eggs, or egg heated to a point short of coägulation of the albumen, the flesh of animals is the most easily assimilated of all food, being already elaborated, and requiring but little change before entering upon its final destination. If to this we add concentration of nutritive power, we can readily see why meat of all kinds, and beef in particular, should be esteemed invaluable as an article of food. It is on these theories that the extensive use of beef-tea and extract of beef is based.

I now come to the consideration of the question, whether the extract of beef contains the *azotized* or *nitrogenous* elements of beef. According to the foregoing conclusions—and I have taken nothing for granted—unless it can be shown to be nitrogenous in its ultimate elements, it can not nourish the system nor impart direct strength to it. By this test, extract of meat must stand or fall. There is not one law for extract of meat, and another law for all other substances. The law is the same in all cases, and scrupulously impartial. At the beginning, I stated that Baron Liebig was the first to recommend the use of the extract of beef. It would appear, however, that he never recommended its *abuse*, for we find that a short time before his death, he publicly repudiated ever having stated that extract of beef was food capable of sustaining life. A synopsis of the paper in which the veteran chemist vindicated his opinions, is given by the "London Medical Record" of April 16, 1873, and affords highly important evidences on a question on which he was, perhaps, better qualified to speak than any one else.

He wishes it to be distinctly understood that "he never asserted that beef-tea and extract of meat contained substances necessary for the formation of albumen in the blood or muscular tissue"; and "that, by the addition of extract of beef to our food, we neither economize carbon for the maintenance of the temperature, nor nitrogen for the sustenance of the organs of our body; and that, therefore, it can not be called 'food in the ordinary sense,' but we thereby increase the working capabilities of the body, and its capacity to resist exterior injurious influences—i. e., to maintain health under unfavorable circumstances." The editor of "The Record" summarizes the remaining contents as follows: "Those constituents of meat which are *soluble* in boiling water, take no part in the formation and renovation of the muscular tissues, but by their effect upon the nerves they exercise a most decided influence on the muscular work, wherein meat differs from all other animal and vegetable food. He (Liebig) therefore places extract of meat (essence), and with it tea and coffee, under the head of 'nervous food,'

in contradistinction to articles of 'common food,' which serve for the preservation of the temperature and the restoration of the machine. Beef-tea and extract of meat are of themselves incapable of supporting nutrition or maintaining life. Liebig, however, with justice, condemns the conclusions of those who, from comparative experiments on the nutritive value of fresh meat and meat-extract, taken *per se*, argue that the latter is not only useless for the purpose of nutrition, but positively injurious. It should be clearly understood that beef-tea and extract of meat are only to be regarded in the light of auxiliaries to food, rather than independent articles of nutriment."

From this, it appears "that by the addition of extract of meat to our food we neither economize carbon for the maintenance of the temperature, nor nitrogen for the sustenance of the organs of our body;" that it can not be called "food in the ordinary sense," and, hence, is placed side by side with "tea and coffee," under the general name of "nervous food." This is pretty hard on those who believe that extract of beef is beef "simmered down," or the quintessence of beef, and who place the utmost confidence in its nutritive and life-sustaining properties.

Science and common sense are here in perfect accord. No one ever dreams that the juices contain all, or any considerable part, of the nutriment of fruit. No one imagines that the brown liquid poured off his dinner potatoes carries with it the nutritious elements of that valuable vegetable, or that he would derive any benefit from using potato-tea. No one seems to think that his apple dumpling has deteriorated in the boiling, or that apple-dumpling tea contains all the nutriment that apple dumpling is capable of imparting. "Those constituents of meat which are soluble in boiling water take no part in the renovation and formation of muscular tissue." This quotation from Liebig's paper contains a lesson worth remembering, since it is as applicable to most other articles of food as it is to meat.

From this, it is evident the less artificial our food the better,

whether in health or disease. Of late years, it has been too much the fashion to run after artificial preparations, such as extract of meat, concentrated milk, infant's food, chemical food, and the like. I have no hesitation in saying that such preparations are not only wholly unnecessary, but absolutely injurious under the ordinary circumstances of life. I grant some of them may be of use for purposes of travel, or under other conditions, placing the simpler and more natural articles of food beyond reach. To this I would make exception in favor of extract of meat, for, although it is not food in the ordinary sense, yet it may be given with advantage in cases of extreme nervous and physical exhaustion.

A few years ago, every invalid was recommended to transform himself into a carnivorous animal. Copious instructions were given for the preparation of meat, and confident promises of restoration to health were freely made. Civilized people, however, have always had an aversion to raw meat, and the practice, I believe, has not become very general. Raw meat is prepared for use by first beating it into a pulp. Lately, I have been in the habit of directing this pulp to be cooked, simply by adding boiling water to it and agitating the whole briskly. It may be made of any consistency to suit the individual taste, and savored according to the same rule. It may be allowed to infuse a few minutes, as thereby it is rendered more palatable to most persons. In cases of very feeble digestive power, a few drops of muriatic acid, well diluted, taken immediately after each meal, will greatly aid its digestion. This preparation is well suited to all cases where no hunger is experienced and mastication is irksome, or where food is loathed, and the digestive powers are feeble—in fact, in all such cases, as it has been the custom of late years to administer the imaginary food called beef-tea or extract of meat. I find that patients prefer the beef pulp, prepared as I direct, to the extract, while, in point of nutrition, no comparison can be drawn between them. I would only add that it is quite possible to place too much reliance on beef and brandy in cases of extreme nervous and

physical exhaustion. New milk and fresh raw eggs are equally important, and there can be no reasonable doubt, that a due admixture of these and other articles, judiciously administered, is the surest and speediest method of restoring to nature her exhausted strength.—*Canada Lancet.*

ANALYTICAL DEPARTMENT.

"Qui e nuce nucleum esse vult, frangit nucem."—PLAUTUS.

Boracic Acid as an Antiseptic.—Professor Lister, at a late meeting of the Medico-Chirurgical Society of Edinburgh, made an oral communication ("Edin. Med. Jour.") on a case of rodent ulcer, and a new antiseptic dressing suitable for such cases.

The disease involving a large extent of the cheek, both eyelids, both nostrils, a considerable portion of the upper lip and part of the lower one, it was impossible to cover the raw surface by a plastic operation. It was, therefore, of importance that efficient antiseptic means should be employed; for there is no more simple or more striking illustration of the value of this principle of treatment, than the entire absence of inflammatory disturbance around an open wound when putrefaction is really prevented from taking place in it, the "stimulus of necesity" of John Hunter being, in truth, simply the stimulus of putrefying substances, so that the danger which usually attends open wounds is entirely avoided by efficient antiseptic measures. But the antiseptic dressing usually employed, consisting of gauze impregnated with carbolic acid, and a layer of prepared oiled silk interposed to protect the raw surface from the irritation of the acid, would have been unsuitable here, because putrefaction would have spread from the mouth and nostrils beneath the "protective," which, while it excludes the irritation of carbolic acid, prevents in equal degree the penetration

of its antiseptic virtue. In cases like the present, where causes of putrefaction can not fail to gain access to some part of the wound, the antiseptic must be applied directly to the divided tissues, while at the same time it is desirable that it should be as little irritating as possible, so as not to interfere with cicatrization. These conditions were fulfilled very satisfactorily by means of an ointment, composed as follows: Boracic acid in fine powder one part, white wax one part, paraffin two parts, almond oil two parts. The ingredients, after being mixed by melting the wax and paraffin, are stirred in a warm mortar till the mass thickens, and then set aside to cool, after which the firm substance is reduced in a cold mortar, in successive portions, to a uniform soft ointment. This is spread thin on fine rag, and when the almond-oil leaves it, as it soon does through capillary attraction of the porous external dressings, a smooth firm layer remains, consisting of blended wax and paraffin, together with the boracic acid, which comes off from the skin without leaving any greasy substance adhering, and does not at all confine the discharge, which, while freely shed, is perpetually supplied with a sufficient quantity of the boracic acid to insure absence of putrefaction, while not preventing cicatrization. Such was the dressing employed in the present case, and it was beautiful to see the large raw surface, though involving such sensitive structures, yet perfectly free from surrounding redness or puffiness, while the patient, except for a short time during the day of the operation, experienced no uneasiness whatever.

Dr. Mathews Duncan, nearly a year ago, had been told by a patient of the very great relief she had obtained by the use of boracic-acid ointment in prurigo; since then, in many other cases, he has seen much advantage from its use.

M. Peyraud ("Bordeaux Medical and Bull. de Therap."), having previously established that the bromide of potassium possesses the property of arresting local circulation, and that a concentrated solution of the salt, subcutaneously injected, produces eschars, reports a case of an extensive bleeding and vegetating

cancroid of the face, which he treated by daily applications of the salt, finely powdered, over the mass. In twenty-eight days the projection formed by the disease had disappeared, leaving, however, its base of implantation in the deep tissue. It is stated that these applications have the great advantage of being painless. Peyraud thinks that the bromide acts by arresting the circulation in the capillary vessels rather than by destroying the tissues mechanically like caustics. It is suggested that this salt may be useful in checking fleshy growths, etc. In morbid growths, in which the skin is not ulcerated, a concentrated solution may be injected into their substance, or the integument may be previously destroyed.—*Irish Hospital Gazette.*

A New Method of Administering Iodine.—M. P. Collas describes, in the "Bulletin Gén. de Thérap.," a new method of administering this remedy. On account of its strongly irritant action upon the organs with which it comes in contact, iodine is rarely employed in a free state. It must be dissolved in alcohol, and administered with a certain degree of caution. In truth, the tincture should be given with a strongly alcoholic wine, to prevent precipitation upon the walls of the stomach, which would irritate them and infallibly produce vomiting. Moreover, the tincture is of variable composition, for with time the iodine reäcts little by little upon the elements of the alcohol, and there is then produced hydriodic acid and hydriodic ether. The attempt has been made to associate iodine with some organic matter capable, by its own re-solution, of delivering up iodine to the economy, as, for example, the iodide of starch. But this preparation is of variable composition—a grave inconvenience to the physician—and, moreover, its taste is rather disagreeable. Pills of iodised albumen present the advantage that the iodine is combined in a constant and known proportion. The iodine is completely masked, and its presence can only be recognized by destruction of the organic matter. This albumen is prepared by agitating actively an albuminous solution with iodine in very fine powder, or in solution in some

appropriate vehicle. The mixture is at first highly colored, blackish-brown, but this color gradually disappears after several hours of contact, and the preparation strikes a violet color with starch. The product is then desiccated under gentle heat in an air-bath, when it may be made into a pill mass. The dose is so arranged that each pill shall contain five milligrammes of iodine. The experiments at the Hospital Beaujon, by Professor Dolbeau, have shown that iodine thus prepared has no bad effects whatever. The pills, in the dose of five or six per day, act rapidly in the re-solution of an hypertrophy of the thyroid gland. Iodised albumen seems to have the efficacy of cod-liver oil. It has been administered in cases of chronic osteitis, ganglionic engorgement, strumous keratitis, and in two cases of Pott's Disease with congestive abscesses. It may be continued for several weeks without gastric derangement or other inconvenience.—*New Remedies.*

Universal Anœsthesia.—A Rare Case.—Professor Schüppel ("Archives der Heilkunde—Archives Electricity and Neurology") gives a very complete account of a case of universal anæsthesia. The patient, a man of 42 years, had profound anæsthesia of skin and muscles of nearly the whole body, and yet did not suffer any great disturbance of coördination. The condition began during a convalescence from a severe attack of fever twenty-two years previous, and gradually increased until death. Post-mortem examination showed that while the brain was normal there were extensive pathological lesions in the medulla spinalis and the posterior and lateral columns. Central softening had taken place, and a cavity filled with serum extended from the first cervical to the first lumbar nerve. The lower half of the cervical portion of the posterior columns was entirely destroyed, and could not be recognized at all. The upper half, although it still retained its consistency, was in a condition of gray degeneration, and made up of a connective tissue mass. In the dorsal region the posterior columns were much atrophied. The lateral columns were normal from medulla to second cervical nerve, but the remaining portions

showed a sclerosed condition to a greater or less extent. No pathological change could be found in the peripheral nerves or in the tactile papillæ.

Inhalation in a Case of Casts of the Bronchial Tubes.—Dr. Edwin Payne, Physician to the North London Hospital for Consumption, reports ("Lancet") the following interesting case:

At the latter part of 1873 a youth, aged sixteen, presented himself as an out-patient at the infirmary in Margaret street, complaining that he was much troubled by coughing up frequently, indeed almost daily, a firm white material, sometimes in considerable quantities. This, upon examination, presented the appearance of regular formed casts of the bronchial ramifications, from bronchi of the third and fourth order, consisting of tree-like, repeatedly forked coägula of a white color. Upon examining the chest the sounds were healthy, with the exception of some sibilant rhonchus at the infra-scapular region on the left side. He had brought up these casts during a period of two years. The only history of previous illness was, that as a child he had had diphtheria.

For the space of two months he was under treatment, and used an inhalation of creasote and tincture of iodine, five minims to ten minims of each in a pint of steaming water twice or three times a day; at the same time he took some dilute nitric acid and bark twice a day. The progress of the case was, that the casts gradually diminished, and concurrently the amount of the sibilant rhonchus diminished also, until at the end of the two months he was free from his trouble, and upon reporting to me on two or three occasions, the last of which was after the lapse of three months, he had had no return. It is now six months since I had a report, and I conclude that he remains well, as it was understood he would report to me if necessary.—*Exchange.*

CLINICAL RECORDS.

"Ex principiis, nascitur probabilitas: ex factis, vero veritas."

ART. I.—OVARIOTOMY—DRAINAGE INSTITUTED—METASTATIC HEPATIC ABSCESS, ETC. By R. B. FAUCHER, M. D., Bremond, Texas.

I was called, on the 1st of June, to see Mrs. R., who had been suffering several weeks from what the attendant physician supposed to be ascites. The history of the case revealed the following facts: Four or five weeks previous to my visit, patient had first noticed a swelling in the right iliac region; the tumor had gone on increasing with great rapidity from day to day, till, at the time I saw her, it had attained the size of utero gestation of seven months. She was disposed to attribute its origin to an injury that she received some three months before by being jerked backward while holding her horse by the bridle. Patient was forty-four years old, and up to the beginning of this disease, had always enjoyed good health, and had borne children, the youngest of whom was fifteen years old. About a year after the birth of this one, she was left a widow, and so remained for twelve years; marrying again about two years since. She had never suffered from any uterine trouble before, menstruation still going on well. She was considerably prostrated at the time, both from the disease itself as well as from the depletion arising from the diuretics and hydragogue cathartics that had been given her with the view of "drawing off the water."

Upon examination, together with the above history, I diagnosed ovarian cyst, and with other evidence—viz., the rapidity of its growth, its nodulated feel on palpation, etc., I pronounced it multilocular. I so expressed myself to the family, suggesting at the same time the different means that surgery offers for the relief of such cases.

I saw the case no more for nearly two months, she having had the good fortune to fall into the hands of an "old and ex-

perienced physician," who disputed the correctness of my diagnosis, pronouncing it uterine fibroid instead. He gave her hope of cure by medication, in which, of course, he failed.

The family again applied to me. A second examination but verified my former opinion. In the meantime, the tumor had attained an enormous size, so much so that she breathed with great difficulty, and suffered extensively from pressure on the abdominal viscera. Dr. H. W. Brown, of Waco, saw the patient with me, and we agreed upon paracentesis abdominis, as much for an exploratory measure as for the purpose of affording the patient relief. Only about a gill—after a long and tedious process—of thick, gelatinous fluid escaped through the canula. Thus, all idea of affording the patient even temporary relief by this process was nugatory. Dr. B. concurred with me that ovariotomy, however hopeless its success might appear, should be resorted to at once. I suggested the operation to the family, explaining its nature and its gravity, especially in her case.

I saw her no more for a week. She now had to occupy a half sitting posture all the while, being unable to stand on her feet; the tumor still increasing rapidly, and death, without some interference, was inevitable in a short while. With these facts before me, and the constant importunities of the patient, I concluded to operate at once, notwithstanding I had great misgivings as to the result, for several reasons:

1st. I feared some malignancy connected with the disease; 2d. The patient was already completely prostrated; 3d. From the want of proper attention after the operation was performed, as the family was poor and unable to procure such things as are absolutely indispensable in such cases.

On the other hand, if she died under the operation, she would die in a very short time without it; 2d. The operation afforded her the only possible hope, however meagre, of recovery; 3d. It was moral cowardice to neglect it.

On the 1st of August, with the kind assistance of my confreres at this place—Drs. Poole, Hightower, and Brodnax—I

operated. I placed the table (composed of two dining tables, such as we find in the country) in front of and at an angle of forty-five degrees with the window, and took my position on the right, facing the light, and everything else arranged after the manner of Keith. Drs. Brodnax and Hightower attended to the anæsthesia of the patient, using for that purpose a mixture of two parts each of ether and alcohol and one of chloroform. Dr. Poole assisted me while operating. My first incision was about three inches in length on the linea alba, midway between the umbilicus and pubis, and extended not quite through the abdominal parietes. Cautiously, with a probe-pointed bistoury, I extended the incision through the walls, aware of my inability to empty the cyst wth even a *large* size trocar, from the nature of the fluid, as ascertained on my attempt at tapping. I made an incision of half an inch in length into the sac, with the intention, if possible, of emptying it. Failing still to accomplish that end, I inserted my right hand between the walls of the abdomen and tumor and attempted to press it out from behind, and succeeded to a limited extent. I then extended the incision in the abdomen upward toward the umbilicus about an inch, enlarged that in the cyst sufficiently to admit my left hand, when, after several minutes, I succeeded with great difficulty in scooping out the thick, glutinous mass contained therein. A pint or more of the fluid escaped into the abdominal cavity in spite of my utmost endeavors to prevent it. The sac was easily torn from its attachments, being very slight, and having drawn it out, I severed it from the pedicle, and ligated the pedicle with silk. I succeeded in clearing the abdomen of the fluids that had accumulated during the operation, and controlled the bleeding vessels, all of which were so small as not to require ligation. I disposed of the pedicle by religating it with carbolized silk, having removed the former ligature, swabbed the end with crystal of carbolic acid, and dropped it back into the abdomen. I closed the incision with iron-wire sutures, using one every half inch. I then applied five or six adhesive straps, three inches broad, overlapping each

other from ilium to ilium, thus covering in and supporting the whole hypogastrium from the pubes to a little below the umbilicus, then cotton-batting over the whole abdomen to fill up irregularities, a broad flannel over all; gave the patient a full opiate and put her to bed.

Fourth Day.—Considerable tympanitis and some symptoms of septicæmia. Gave turpentine, ten drops, every four hours, using turpentine fomentations to the abdomen as well. I introduced the trocar and canula through the vagina into the cul-de-sac of Douglas, and drew off the animal fluids and pus that had collected there. This latter procedure I repeated every two or three days throughout the progress of her recovery. Here I must do honor to the great gynæcologist of America, J. Marion Sims, for his invaluable suggestion of the drainage tube. This, in the after treatment of ovariotomy, I conceive to be an acquisition not inferior to the iron-wire suture in operating for vesico-vaginal fistula. Ever afterwards, when I am called on to operate on a similar case, I shall provide myself with the drainage tube, as suggested by the great author, as a *sine qua non* to my success.

The above treatment I continued for ten or fifteen days, modifying it as the case demanded.

Sixteenth Day.—Patient had an attack of remittent fever, which lasted several days, and which stayed the progress of recovery somewhat.

Thirtieth Day.—Was called to see her on account of an acute pain, from which she was suffering, in the right hypochondrium, and other symptoms denoting some hepatic trouble —viz., anorexia, febrile movement, constipation, etc. Gave quinine, used warm applications to the region affected, and at night gave a mild aperient.

For the next and several days, notwithstanding the wound went on healing finely, and the patient seemed to be doing well, so far as the operation itself was concerned; yet, from the deep, dull pain and tumescence of the right hypochondrium, hectic, and general *persistent* debility, I feared hepatic abscess,

probably from metastasis. My fears were realized, when, on the night of September 13, I was summoned to come in great haste to see Mrs. R., who was almost strangling from the great quantity of matter that she was coughing up. Not doubting but that the abscess had ulcerated through the diaphragm into the lung, and through that medium was being expelled. I supported the patient with alcoholic stimulants until she was relieved for the time. I then began with her the inhalation of carbolized and muriated tincture of iron, from the atomizer, three or four drops of each to the ounce of water, using it two or three minutes at a time every hour. This I continued for two days, and after that time used it thrice daily for a week or more. The discharge from the lungs entirely ceased, hectic, hypochondriac pains, and indeed all the symptoms incident to the abscess were relieved. After this the case went on doing well.

I called to see her, being in the neighborhood, two months and a half after the operation, and found her up walking about the yard in comparatively good health, with a prospect of several years on the stage.

In the latter part of October dysentery prevailed to a great extent through this country. She fell a victim unfortunately to that disease, of which she died, about four months after the operation. Dying, as she did, with another and wholly different disease, I am left unable to determine the actual success of the operation. Were the neoplasm malignant, that same diathesis, that known dyscrasia, would certainly have shown itself again in time.

The tumor was very large, weighing over thirty pounds. The cyst was thick, growing less so toward its anterior aspect; white and glistening externally; of a rose color and ragged within. The general appearance of the tumor was an oblong spheroid, slightly flattened antero-posteriorly. Its contents were divided into a number of segments by thin membranous sheaths passing through it. The fluid in each of these segments differed from that of its neighbor, both in consistency

and appearance, varying from a thin gelatinous mucoid to a thick, semi-solid sarcomatous material. These segments gave the nodulated appearance on it. exterior subsequent to the operation, which led me astray in diagnosing it multilocular. I now regard the growth as a unilocular myo-sarcomatous neoplasm.

From its well-known proclivity to return, the disease might again have manifested itself had she lived sufficiently long, but would that question the legitimacy of the operation in the above case? I leave that to older and infinitely better surgeons than myself to determine.

PROCEEDINGS OF SOCIETIES.

"Etsi non prosunt singula, juncta juvant."

Arkansas State Medical Association.

Some n otices having appeared in your Journal, and previously in the secular press, of the rupture in the Medical Association of the State of Arkansas, it may not be improper that a full statement of facts in the premises be made to the medical world. Such is the object of the present writing, and a small space is solicited for a compiled record of the facts. It is not proposed, as the enemies of our Association have done, to parade medical differences in the newspapers, and we even regret the necessity of presenting such facts in the journals of medicine. But truth and justice, and the good of the Profession, seem now to justify such defence.

In 1872 unpleasant differences existed between Dr. Almon Brooks of the one part, and Drs. George W. Lawrence, O. A. Hobson, and Prosper H. Ellsworth of the other—all residents of Hot Springs, Ark. There being no Association nearer to them, the difficulty was referred to the Little Rock and Pulaski County Medical Association. It came up in this way—on the 6th of April, 1872, Dr. C. Watkins presented the name of Dr.

Almon Brooks, of Hot Springs, Ark., for membership. The application lay over under rule until the next regular meeting, from the minutes of which we make the following extract: "May 4, 1872, Dr. Meadow, chairman of the Committee on Credentials, reported on the case of Dr. Brooks, of Hot Springs, whose application for membership had been referred to said committee, and as charges had been alleged by Drs. Hobson, Ellsworth and Lawrence, asked the appointment of a special committee for a more thorough investigation. * * * The case was referred back to the Committee on Credentials, with instructions to furnish Dr. Brooks with a copy of the charges preferred, and to obtain all the facts bearing upon the case possible."

That the case came fairly before the Association for settlement, appears by the voluntary application of the petitioner, and the energetic and voluntary resistance of his opponents, for one of them, Dr. George W. Lawrence, says in his letter to the President, "as a self-constituted censor, as a member of the American Medical Association, your State Medical Association, and a member of other respected Medical Societies, I now constitute you (the Pulaski Association) a *comites consultus*, and I arraign Dr. Almon Brooks before you as a professional fraud," etc.

The committee, after two months' thorough and impartial investigation, made report on the 1st of June, 1872, sustaining Dr. Brooks, which was adopted by a more than two-thirds majority. More than one-third of the Association being of the opinion that jurisdiction could not be extended beyond the county limits, he was not admitted to membership, two-thirds being required to elect. It was at once discovered that the enemies of Dr. B. had circulated at Hot Springs the report of his rejection by the Association, not by reason of want of jurisdiction, but for professional demerits. A called meeting was made for June 4, at which resolutions were passed more fully sustaining the accused, and for his protection against what was thought to be an unjustifiable oppression. These resolutions of the called meeting were ratified at the subsequent monthly meeting.

There were seventeen members sustaining this action, and eight dissenting. The eight dissenters bolted from the Little Rock and Pulaski County Medical Association, and organized what is known as the College of Physicians and Surgeons of Little Rock. Thus matters stood until the meeting of the State Association of '72, when Dr. Brooks was formally admitted to membership. Objections of the most obstinate character having, however, been raised, the whole question was referred to the Committee on Ethics, to report at the next annual meeting.

Just at the adjournment of the '72 session, two protests and derogatory charges against the Pulaski Association were filed, one signed by three and one by five of the seceders from the Pulaski Association. No action was taken upon these "protests," except to refer them to the Committee on Ethics, and yet they were made public by the Publication Committee without authority, and to the prejudice of the Pulaski Association. The majority of this committee seemed to be controlled by men actuated by prejudice, and a determination to destroy one man for the gratification of others.

It was this unwarranted publication that forced the Pulaski Association to make a publication of the entire transactions in the Brooks–Lawrence case. Thus the case stood at the commencement of the annual session of 1873, when it was agreed to relieve the Committee on Ethics of the investigation of this case, and refer the matter to a special committee, whose action was to be final, but in conformity with the code of ethics, and predicated alone upon the proofs already before the Association, and no new matter to be introduced. A resolution had also been previously adopted prohibiting the Publication Committee from publishing unauthorized matter, in the following terms: "Resolved, That in the future the Committee on Publication shall have no power to act on any paper referred to another committee; until the said committee shall have reported on the same, or until the matter shall have been referred to the Committee on Publication."

Under these circumstances, the session of '73 adjourned. The Publication Committee, as is believed, being controlled as before, failed to insert the above resolution in the proceedings, but did insert the unauthorized report of the special committee, which was seemingly hastily made for the occasion immediately after adjournment. And there is positive proof that new charges were presented before this special committee, and acted upon without even a notification to the accused. This is evidenced by the fact, that a first report was prepared and then withdrawn by the committee, recommending the expulsion of Dr. Brooks, thereby admitting his membership obtained in '72, and this recommendation was predicated upon charges mentioned by the committee that had not been heard of before.

It is also a matter of record, that the Committee on Credentials, at the session of 1873, reported Dr. Brooks as a permanent member, which report was adopted; but this portion of the minutes was suppressed by the partisan majority of the Committee on Publication.

The tactics were changed, however; this first report was not allowed to be published, and another was substituted, enumerating many professional foibles of all the parties involved, especially the Pulaski Association, and it closes with the declaration, "that up to the commencement of this unfortunate difficulty, Dr. B., of Hot Springs, had been considered of *clear* ability, but recommends that he be '*not admitted.*'"

Thus matters stood at the convening of the session of 1874, when the Association determined that the recommendation of the committee, that a doctor "be not admitted" who is already a member, was not sufficient to expel him. The Association tabled the committee report, reïnstated, or rather settled the status of Dr. Brooks as a member. It was the calm, deliberate action of the majority, usually supposed to be right. The minority not willing to admit it to be right, have a perfect right to withdraw. Some fifteen or twenty members have done so. But whether or not dissenting minorities are professional, in making scurrilous publications of the parent association in the

secular and medical prints, is a question for the Profession to settle, if it is not already settled by the code of ethics. If leading conspirators against the Association by letters and other influences, induce members at a distance who are not conversant with the facts to withdraw, we are confident in the expectation that when properly informed they will return and bring others with them. The places of those withdrawn are already being rapidly filled up, and the great medical wheel will revolve as ever. The State Association will not be broken up. The Profession will stand to its support. It is the failure of the Association to sustain a minority in what was thought to be wrong, that is the cause of the offence. We request the Profession to investigate this whole question, and we have no fears of the result.

Two county Associations have been induced by the conspirators to pass resolutions disapproving the action of the State Association. These resolutions have been published to the world for effect. Many county Societies have resolved to sustain the Association, but it has not been thought necessary to give publicity to such resolutions, or spread before the world professional troubles.

WILLIAM THOMPSON, M. D.,
First Vice and acting President,
Arkansas State Medical Asso'n.

ORIGINAL CORRESPONDENCE.

"Sit mihi Fas scribere audita."

LEXINGTON, N. C., Jan., 1875.

Dr. E. S. Gaillard:

Dear Doctor,—Have you read that pamphlet by Joseph R. Beck, M. D., of Fort Wayne, Indiana, entitled "How do the Spermatozoa Enter the Uterus?"

It is really a marvellous and ingenious production in very

many respects, and the author adduces such an array of facts, so many strong arguments, and the testimony of so many able men to substantiate his theory, that from having been somewhat skeptical, I am now become a believer!! However, allow me to state some of the reasons which were in the way of my not being a convert sooner; stumbling-blocks let us call them, over which I can not yet see clearly.

First, then, the symptoms in the case of Mrs. L., as described by Dr. Beck, were "dragging and weight in the pelvis, more or less pain in back and loins, some vesical and rectal irritation, inability to walk without great fatigue, inability to lift weight of any moment," leucorrhœa, and habitual constipation. The touch showed the uterus to be prolapsed in the second degree. Her "present illness has existed six years; leucorrhœa slight as to amount, is constantly present, is white, glairy, and unmistakably uterine in its character"; and in another place Dr. Beck declares that "the parts were in an entirely normal condition in every respect, except as to position." Now, all this was most wonderful to me; for I have never yet seen a womb so long prolapsed, with a *glairy albuminous discharge*, of uterine origin, which was, in my humble opinion, in a *normal condition except as to position*. Such a condition may be possible, but it is by no means probable!

Dr. Beck further says, "carefully, therefore, separating the labia with my left hand, so that the os uteri was brought clearly into view in the sunlight, I now swept my right forefinger quickly three or four times across the space between the cervix and pubic arch, when almost immediately the orgasm occurred, and the following is what was presented to my view: The os and cervix uteri had been about as firm as usual, moderately hard, and generally speaking, in a natural and normal condition, with the external os closed to such an extent as to admit the uterine probe with some difficulty; but the instant the height of the excitement was at hand, the os opened itself to the extent of fully an inch, as nearly as my eye could judge, made five or six successive gasps, as it were, drawing the ex-

ternal os into the cervix each time powerfully." Moses of old, from Mount Nebo, viewed the promised land and died, and we are surprised that Dr. Beck did not give up the ghost as soon as his eyes had rested upon this sight!

All of this was a huge pill to be swallowed at one dose for the following reasons, among others:

Thomas says: "Endometritis, whether it be cervical or corporeal, fills the uterine canal with a thick, tenacious mucus, which often prevents the entrance of seminal fluid." This condition I have often seen, and believe it to be a frequent cause of sterility; yet it does seem strange that the small amount of mucus which fills a canal, which will scarcely admit a crow's quill, or the uterine probe, should ever be an impediment to the passage of zoöspermes when that small canal will immediately open under the sexual orgasm to the extent of an inch.

It does seem absurd, too, to resort to dilatation with tents, bougies, and dilators, when the canal of the cervix or os internum is so small as to present a mechanical hindrance to the entrance of seminal fluid, if these parts dilate so readily under excitement; and yet I have known many women who have been sterile, to bear children after this very kind of dilatation.

Many of the cutting operations for ante-flexion and retro-flexion of the womb would appear to be utterly useless.

Why need we ever resort to amputation in cases of conoid cervix?

If this hypothesis be true, then those women who never experience an orgasm are necessarily barren; still many a truthful child-bearing woman has declared that she did not experience any pleasure during the act of coïtion. Can a wide-awake, sensible woman have a sexual orgasm and not know it?

In the language of Dr. S. B. Flowers, I would like to have it explained "how the spermatozoa enter the uterus at the time of a fruitful coïtion, when there is some mechanical obstacle intervening—a large globe pessary, for instance?" How does pregnancy occur, when there is really no penetration? Such cases are well authenticated! Does the womb aspirate?

Again, if this theory be the only true one, I confess I can not see how a woman can become pregnant during profound sleep, or while in a state of unconsciousness from anæsthetics, lethargy, or asphyxia. Women experience the sexual orgasm when pregnant; is it not wonderful then, that if the os opens to the extent of an inch under the influence of sexual excitement, and makes a number of successive "gasps," that the pregnant uterus does not abort?

Litzman, Bond, Vallisneri, Dionis, Haller, Henle, Wernich, and Bischoff, adopt, to some extent, views similar to those of Dr. Beck!! Dr. Austin Flint, Jr., states that so does he!! Dr. Flint used to be fond of a good joke. I wonder if he is in earnest?

Dr. Beck makes the womb entirely too "smart"; puts a little too much woman's rights into it, and I am astonished that such views can meet with serious consideration.

R. L. PAYNE, M. D.

MIDWAY, KY., Jan. 4, 1875.

Dr. E. S. Gaillard:

Dear Sir,—I wish to call the attention of the Profession to a shameful evil that should be suppressed, and yet whose very familiarity has given it immunity from assault. I refer to the deluge of *patent medicines* which now, more than ever, inundates the country and overflows from every drug store and country grocery in the land, and against which the voice of the Profession has been but feebly raised, and no organized effort been made to suppress. It is perfectly amazing that medical men in their own protection, and the consideration of the health of the people who look to them for advice, should not take more pains to cut down and destroy this trafic. I believe it is within their reach to very materially cripple it, and at least drive it from the precincts of respectability.

Our Profession is a numerous and a proud one, and it is a shame which they should not rest under, that, scattered throughout the length and breadth of the land, in every village

and hamlet and country side, and having the respect and confidence of neighbors and friends, they can not make their voice potent in the eradication of one of the most shameful and wicked abuses of the age. I believe it requires but an organized effort upon the part of the Profession.

Much can be accomplished at once, and as the generation that follows will have become indoctrinated, they will not be the easy dupes that their thoughtless progenitors have been.

It is well known that all, or nearly all, our drug-houses, from the largest wholesale, to the village retail stores, and even the groceries, not only sell these vile concoctions, but *advertise*, boldly and defiantly a "*full line* of *proprietary medicine* and great inducements to the trade." So of the annual flood of almanacs with the druggist's circular (free of cost) on the cover, lauding the specific virtues of thousands of villainous nostrums, all of which are to be had from the aforesaid druggist.

These may be found from one to a dozen in every house in the land.

Now the remedy I propose, is this: Let a general understanding prevail among physicians, and be firmly adhered to, to patronize no druggist in any way, and especially with his prescriptions, who sells patent medicines. In localities where the Profession have the advantage of local societies, this will become easy, and even where there are none, the physicians could soon form an agreement to this effect. And more than this, let every county, district, and State society refuse admittance to any one professing to be a physician who in his double capacity of physician and druggist, sells patent nostrums, and let the ban of their displeasure forever rest upon one who will so far forget his professional manhood as to present these beastly humbugs.

Cry out upon it through the Medical Press; make it odious and debasing to the Profession, and my word for it, the reflex action from every corner of the land will soon make this monster of deformity skulk into obscurity.

It is well known that the largest and best paying profits in the drug business, is in the physician's prescriptions. If this be taken

away from the druggist, besides the withdrawal of the patronage and good will of all the physicians around him, it will be a strong lever indeed toward the accomplishment of the desired result.

In large places it will be no difficult matter to get one drug store, at least, started upon this basis, and if the physicians around it will rally as one man to his support, others will follow.

Our State and county societies are hereby called upon to speak and act in this important matter. Let them give utterance to an edict in behalf of decency and fraternal obligation, and drive from high places this gaudily bedizened harlot.

P——.

CHEMICAL AND PHARMACEUTICAL.

"Diruit, ædificat, mutat."—Hor.

Ether Glue.—An excellent liquid glue is made by dissolving glue in nitric ether. The ether will dissolve only a certain amount of glue, consequently the solution can not be made too thick. The glue thus made is about the consistency of molasses, and has double the tenacity of that made with hot water. If a few bits of india-rubber, cut into scraps the size of buckshot, be added, and the solution be allowed to stand a few days, being stirred frequently, it will be all the better, and will resist the dampness twice as well as glue made with water.

The Vitality of Seeds.—A correspondent of the "Revue Horticole," in sending the following notes to that journal, states that they were communicated to him by a friend who had ample opportunities for making trustworthy observations on the subject. The figures indicate the number of years in which the seeds may be depended upon as preserving their vitality or power of growth. They represent the periods of time after which the various seeds mentioned have been found perfectly

good, and may be of some use as a guide to those who are uncertain whether to throw away or sow old packets of seeds: Seed of artichoke (globe) lasts good for five years; asparagus, 4; beans (garden), 6; beans (French), 2 to 3; beet, 5; cabbage, 5; carrot, 4; cauliflower, 5; celery, 7; cress (garden), 5; cress (water), 4; cucumber, 5; dandelion, 1; egg-plant, 7; fennel, 6; gourds, 5; leeks, 2; lettuce, 5; maize, 2; melon, 5; mustard, 5; nasturtium, 5; onions, 2 to 3; parsnip, 1; parsley, 3; peas, 4 to 5; pepper, (long), 4; potatoes, 3; radish, 5; rhubarb, 3; salsify, 2; spinach, 5; strawberry, 8; thyme, 2 to 3; tomato, 5; and turnip, 5.

To Remove Grease-Spots from Books or Paper.—Gently warm the soiled part of the book or paper, and then press upon it pieces of blotting-paper, one after another, so as to absorb as much of the grease as possible. Have ready some fine, clear essential oil of turpentine, heated almost to a boiling state; warm the greased leaf a little, and then, with a soft, clean brush, wet with the heated turpentine both sides of the spotted part. By repeating this application the grease will be extracted. Lastly, with another brush, dipped in rectified spirits of wine, go over the place, and the grease will no longer appear, neither will the paper be discolored.

Cosmetics, Enamels, Powders, etc.—No. 1. Phalon's Paphion Lotion, or Floral Beautifier—milk of almonds, chalk, and water; no lead.

No. 2. Piesse and Lubin's Pestachio Nut Skin and Complexion Powder—finely divided and perfumed silicate of magnesia or talc.

No. 3. Wells' Lily White (powdered)—finely divided and perfumed chalk, some carbonate of magnesia, and little silica.

No. 4. Cream Imperatrice—sixty-six parts oxycarbonate of zinc and thirty-three of fat or grease, highly scented.

No. 5. Hagan's Magnolia Balm—66.50 grains oxide of zinc for each ounce fluid.

No. 6. Oriental Cream, or Magical Beautifier—31.50 grains sub-chloride of mercury to each fluid ounce.

No. 7. Perry's Moth and Freckle Lotion—contains mercury, lead, zinc, and bismuth.

No. 8. Burnett's Kalliston—free from metals.

No. 9. Enamel, for the complexion—has a sediment of oxide of zinc.

No. 10. Lotion (label lost)—contains lead, with oxide of zinc.

No. 11. Email blanc de Paris—free from metals.

Perry's Moth and Freckle Lotion contains three violent poisons in considerable quantity.

Some of the enamels contain oxide of zinc, or oxide of lead, and so far are to be put down as unsafe. When they consist of carbonate of lime, talc, or magnesia only, they can not be called poisonous, and yet they can hardly be said to be free from an injurious tendency, as their application to the skin must result in closing its pores and checking its proper action. As in the case of the hair-dyes, there was exhibited an enormous disproportion between the cost of the materials of which these cosmetics are made and their selling price.—*Ex.*

Carbolic Acid Preparations.—Mr. T. A. Baldwin, in a paper read before the British Pharmaceutical Conference, gives the following as advisable proportions in the use of carbolic acid:

As a rule, it is better to dissolve the crystalized carbolic acid in the proportion of one part by weight of the acid to six of glycerin (carbolate of glycerin). In this state it can be diluted equally and indefinitely.

In general, a dose of carbolic acid is one grain in an ounce of water.

As a gargle, 1 or 2 grains to an ounce of water.

As an injection, 1 grain to 4 ounces of water.

As a lotion, 15 grains to an ounce of water.

As an ointment, 30 grains to an ounce of benzoated lard.

As a liniment, 1 grain to 30 ounces of olive oil.

As a plaster, 1 part of carbolic acid to 3 of shellac.

The crystalized carbolic acid to be used as a caustic.

The carbolate of glycerin, as above, should be used in 1 or 2 drop doses.

Antiseptic oil for abscesses, 1 part of acid to 4 of boiled linseed oil.

Antiseptic putty, 6 spoonsful of the antiseptic oil mixed with common whiting.

Aqueous solution of carbolic acid is 1 part acid to 40 of water (1 ounce of acid to a quart of hot water, well agitated and filtered).

Sick rooms to disinfect: place a portion of the dissolved acid in a porcelain dish, and float it in a larger vessel of hot water.

Disinfecting purposes generally: 1 pound of *crystals* to 6 gallons of water. *Fluid*, 1 part to 80 of water. *Powder*, 1 ounce of crystals with 4 pounds of slaked lime.

For drains: take 1 pound of the fluid carbolic acid to 5 gallons of warm water.

Toothache is often cured with one drop of carbolate of glycerin; and diarrhœa arrested in half an hour with 2 drops.

In all cases of parasitic life, it is advisable to commence with very dilute carbolate of glycerin.—*Chemist and Druggist.*

Creasote as a Preventive of Potato Disease.—Rev. J. Crawford, in the Ayr (Scotland) "Observer" thus describes an experiment which he made last spring in the cultivation of potatoes, with a view to the prevention of disease: "In the beginning of this year I noticed in a newspaper a statement that the application of creasote to the eyes of the seed potato would prevent the disease, and this induced me to make some experiments, the results of which I will now proceed to give to the public. These were made with the different varieties of earlies; the potatoes were planted about the middle of April, and raised in the third and fourth weeks of September, the crop of sound ones being fully three times the quantity I had last year, off about the same extent of ground. (1) With a small camel-hair brush, every eye in the seed potato was slightly touched (the slighter the better) with the creasote, and

in the produce of these no diseased potatoes were found. (2) A part of the seed planted had one or two of the eyes not touched with the creasote, and at these were found one or two, seldom three, slightly diseased. (3) Another portion of the seed was planted without any creasote, and, on raising these, from one-third to one-half were found to be diseased, as in some other parts of the country. (4) A very few of the seed potatoes had too much creasote applied to them, and this was found to have destroyed the vegetation altogether—hence the caution under the first experiment.—*Exchange.*

Memoranda in the Arts.—Another interesting invention for which decorative art is indebted to Dr. Kosch is the fusion of gold, silver, and platinum with bronze, by which the most gorgeous effects are produced; gold fusion giving to the metal a splendid violet tint, silver a faintly-lustrous "Kioto" tone, and platinum a rich and deep black shade. The intermediate tints may be obtained by modifications of heat, while the same process may be applied with nearly equal success to cast iron. Dr. Kosch has succeeded in producing very novel effects by laying on one tone upon the other, as, for instance, colored leaves and variegated arabesques on differently-tinted metallic surfaces; and his method is beginning to be extended to the ornamentation of leather, thus bidding fair to revive, at a moderate cost, the art of preparing leather mosaics, which owed its origin to Grolier, and is one of the most elegant of the numerous artistic adaptations of inexpensive materials to artistic purposes for which the sixteenth century was distinguished.—*Ex*

The Science of Adulteration. By S. P. Sharples, State Assayer.—Another article for the adulteration of cream of tartar is coming into use, that is, rice-flour; and some of the wholesale grocers are selling two grades, one pure and the other adulterated with this material.

Coffee is a favorite article for the manipulations of the sophisticator. It may be laid down as an almost universal rule that none of the preparations nicely ground and packed in pound

papers are genuine. The price alone will show this; they are all sold for less than the unroasted berry.

The ground coffee sold in bulk by the grocers is a little better in quality than the above, but generally consists of a cheap grade of coffee, and is often quite largely mixed with ground beans. The detection of these mixtures is very easy. Genuine roasted and ground coffee will float upon the surface of water, while beans, peas, and such articles at once sink to the bottom. Peas, beans, burnt sugar, etc., impart their color much more quickly to water than genuine coffee does. The burnt unground coffee is generally pure coffee, although it may be of a very low grade.

If any one really likes coffee, and does not drink it, as many seem to do, merely because they wish some warm beverage, the best way is to buy the raw berries and roast them at home.

Coffee, to be first-class, should always be put into a tight tin can after roasting, before it has had time to cool, and only ground as wanted for use. If, however, people will insist upon having coffee substitutes, sweet potatoes, dried and then browned as coffee is roasted, makes one of the best substitutes.

The sophistications practiced in regard to tea are the substitution of leaves of other plants for tea leaves, and the occasional mixture of dried spent leaves with fresh ones. This last trick, however, is almost too much trouble. The most common fraud is the change of brand. This is done by buying up old chests bearing a choice mark and filling them with inferior tea of the same general appearance. This is a fraud that no one but a tea expert can detect, more especially after the box has been opened the second time. The tests given in works upon adulteration, which may serve very well to detect such frauds as facing, the mixture of other leaves and sand, iron filings, and dirt in general, are powerless against this sophistication.—*Ex.*

Substitute for Rain.—M. Paral is said to be the discoverer of a way of doing without rain, if necessary. He knew that the air is full of moisture, and he knew that chloride of cal-

cium would attract and condense it, for cultural purposes. He has applied this chloride on sand-hills and road-beds, on grass, on all sorts of soils, successfully, and he has ascertained that it may be applied in such proportions as will produce the irrigation of land more cheaply and efficiently than by means of canals or other methods of securing artificial irrigation. One of M. Paral's applications will produce and retain abundant moisture for three days, when the same amount of water introduced by the present method will evaporate in an hour. He believes that his preparation will not only produce two blades of grass where but one now grows, but that it will render possible fields, meadows, and prosperity, where now there is nothing but sand and desert waste.—*Ex.*

The Artificial Production of Vanilline.—At a recent meeting of the French Academy of Sciences, Dr. A. W. Hoffman stated that his two students, MM. Tiemann and Haarmann, who had obtained vanilline (the aromatic principle of the vanilla bean) from pine sap, propose to manufacture this substance on a large scale. The sap of a tree of medium height gives vanilline to the value of 100 francs ($20), and the wood is not injured by the extraction of the sap. This will be the second vegetable product obtained by purely chemical methods, and its manufacture, like that of alizarine, is likely to be of considerable commercial importance.—*Ex.*

Improved Starch.—A beautiful finish can be given to articles to be starched by taking one-fourth of a pound of starch, and working it over and kneading it with a little water, then placing five or six pints of water in a pan, and adding to this a very small quantity of powdered borax, a small piece of sugar, and a fragment of white wax about the size of a hazel-nut. This water is then to be added to the starch, with continual stirring, mixing the two together until the whole is as thick as is convenient for application. If the articles are to be made quite stiff, the strength of the starch may be increased two or three fold.—*Ex.*

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

"Judex damnatur cum nocens absolvitur."

A PRACTICAL TREATISE ON THE DISEASES OF WOMEN. By T. GAILLARD THOMAS, M. D., Professor of Obstetrics and Diseases of Women and Children in the College of Physicians and Surgeons, New York, etc., etc. Fourth Edition, thoroughly Revised; with One Hundred and Ninety-one Illustrations on Wood. One volume, 8vo., pp. 801. Philadelphia: Henry C. Lea. 1874.

Six years have elapsed since the first edition of Professor Thomas' book was reviewed in this Journal; the brilliant success achieved by it has more than justified the favorable opinions then expressed.

During these six years three editions have been exhausted, and upon the writer of these pages now devolves the pleasant task of reviewing the fourth edition.

To one who has watched its progress, the course of this work is full of interest. From the first, it was thoroughly practical, and its teachings sound, and clearly and concisely expressed; it abounded in forcible and felicitous anti-thesis; it avoided the purely theoretical and emphasized the truly scientific. Almost every page bore unmistakable evidence of the author's lively interest and thorough familiarity with his subject. These characteristics have been preserved throughout, and although in the successive editions the work has been greatly modified, much of it rewritten, and a vast deal of new matter added, there is not a dull chapter in the whole book. The first edition had been eagerly looked for, and surpassed in excellence the great expectations of all. Its reception at home was extremely flattering, and its rapid sale testified the great favor it found with the Profession.

During these six years it has attained a most enviable celebrity abroad, and has been translated into several foreign languages. Each edition bears the mark of the author's continued industry, accuracy, and broad and enlarging views. There

is nothing petty or narrow about the book; but, on the contrary, it is distinguished for its justice and liberality toward others; for its unflinching truthfulness and perfect fairness in stating facts and views. He never glosses over a mistake, but always gives his readers the full benefit of his unsuccessful cases, as well as those in which he achieved a brilliant success.

On comparing the fourth with previous editions, it is found that the reading matter has been greatly increased; a number of comparatively inferior and less instructive illustrations have been excluded, and print substituted for them. The wood-cuts in this edition are all excellent, and many are quite new to a great number of American readers.

The contents and general arrangement of so celebrated a work are too well known to require notice.

In its present shape, Professor Thomas' book on Diseases of Women is not only the most practical and the most readable work on this specialty in the English language, but it more fully and completely represents the most recent and the best knowledge on the subjects it treats of than any other book accessible to the general practitioner.

In the earlier part is a very timely chapter on the etiology of uterine diseases. After reading it, one can not help feeling that mankind, and especially womankind, would be greatly benefitted had more physicians the happy faculty of Dr. Thomas in impressing their patients with the important facts so powerfully presented in this chapter.

Among the prominent causes of uterine disease, he recounts want of air and exercise, excessive development of the nervous system; improprieties of dress; imprudence during menstruation; imprudence after parturition; prevention of conception and induction of abortion; marriage with existing uterine disease. The latter is a crime against the husband and against society, which the physician always ought and often may be able to prevent.

The views of the author as to the comparative strength and perfection of men and women are well stated in the following

passage: "Observation proves that women, who are not exposed to depreciating influences, can compete in strength and endurance with the men of their races, and in savage countries they are sometimes regarded as superior to them. . . . . From all the facts, we may logically argue that the human female, if properly developed and placed beyond causes which militate against her physical well-being, would be in no great degree the inferior of the male." The position he assumes is that the customs of civilized life have depreciated her powers of endurance and capacity to resist disease.

There will be found in this edition a very valuable addition in an article on "Hyperæsthesia of the Vulva." This affection has, no doubt, been often mistaken for vaginismus, but, unlike the latter, it does not so certainly entail sterility upon its victim; nor is it so likely to be relieved by childbirth. This is a point not mentioned by the author, but the writer has seen it illustrated in some of the few cases that have come under his observation. Professor Thomas regards it as "an abnormal sensitiveness, a plus state of excitability in the diseased nerves" but not a true neuralgia.

The description of this painful and distressing affection is graphic and most accurate; according to the author there are cases in which no causes whatever are apparent, but irritable urethral tumors and chronic vulvitis seem to be the most frequent exciting causes. But even if these lesions do not preëxist, is it not probable that some inflammation of the vulva will soon be excited by such intense irritation? In all the cases the writer have seen there was more or less vulvitis.

Professor Thomas has met with six cases, but in not one was relief given by treatment. He speaks unfavorably of the use of caustics and the knife, and advises removal of exciting cause, change of air, scene and surroundings, and separation for a time from the husband if the patient be married.

Sedatives, astringents and the copious use of warm water are also recommended. The author is certainly justified in condemning caustics and the knife. Unpromising as these cases are, yet some other measures may, perhaps, be found beneficial.

In one case, the local application of hydrate of chloral produced good results, and in another the daily introduction of a large-sized quadrivalve speculum, which was allowed to remain for twenty minutes or half an hour, seemed to considerably diminish the sensitiveness of the vulva; indeed both these measures are mentioned by the author for the relief of vaginismus.

In a very rebellious case, electricity might be expected to do good; experience has proved its power to favorably influence other and analogous morbid states of the skin and mucous membrane.

In the treatment of vaginismus, removal of the hymen and incision of the perineum are practiced by Professor Thomas only as a dernier resort; he claims not only that many cases, even of grave character, have been cured by distension of the vagina either with the fingers or by expanding instruments and subsequent use of the vaginal plug, but that the cure can be made as perfect and rapid as by the cutting method.

In the chapter on Fistulæ of the female genital organs, the reader will find an interesting account of Simon's method of operating in vesico-vaginal fistula. This is peculiar, and deserves to be mentioned; it differs in various respects from that of Sims. The patient is placed on the back with the hips so elevated as to make the breech the most projecting part. Simon calls it "steiss rücken lage," and claims for it various advantages not attainable in any other position. He rejects the use of silver sutures as better than fine silk. He includes the mucous membrane in the abrasion of the edges of the fistula. He uses no stationary catheter, and has the urine drawn during the first twenty-four hours only, and this not always. He allows the bowels to be evacuated whenever nature prompts it; and does not diet the patient nor confine her to bed. At times he even permits out-door exercise in twenty-four hours after the operation, in favorable cases. These rules are very different from those recommended and practiced with us. The results, however, obtained by such means or in spite of them, appear

to have been these: Of 118 fistulæ in 105 patients; 104 fistulæ in 92 patients, were completely cured; 5 fistulæ in 5 patients were almost entirely closed; 2 patients with 3 fistulæ discharged as incurable, and 6 patients died.

Simon recommends the removal of the stitches on the fourth or fifth day; says it is unnecessary to let them remain longer. It may be not only unnecessary but injurious to do so when silk ligatures are used, but Sims, who, of course, uses silver wire, removes these on the eighth day. Professor Thomas, however, has shown in another edition of his work, by calling attention to Dr. Schuppert's two cases, that it is safer to let them remain from eight to fourteen days. In these cases a leaking was detected when the bladder was injected on the sixth and seventh day, which had disappeared entirely on the twelfth day, when the sutures were removed and the cure was found complete.

In discussing the vexed question of intra-uterine injections, the arguments for and against are fully and fairly stated. The author regards such injections as comparatively safe in the hands of skilled specialists, but always dangerous with the general practitioner. Excellent rules, detailed and practical, are laid down for the guidance of those who shall venture to practice this mode of treatment, although Professor Thomas says it has caused death in a number of instances, and often produces most alarming symptoms. Indeed, he confesses to share in the feelings of those who are greatly alarmed by these symptoms, for they are alarming, and not in appearance only, as has been abundantly proven.

AREOLAR HYPERPLASIA

is the new name under which Professor Thomas describes so called chronic parenchymatous metritis. There has been and still remains so much of bad nomenclature in writings on medicine, that an appropriate and descriptive name of a disease is always a desideratum. There can be no doubt that hyperplasia of connective tissue is the chief anatomical feature of this disease of the uterus; Scanzoni and Klob acknowledged this long

ago. The Profession will accept this new name, and that for the reason its originator has given; it is faithfully descriptive of the condition to which it is applied, and a necessity for some such term exists. This chapter is one of the most interesting and instructive in the whole book; it contains a table setting forth the differential diagnosis between areolar hyperplasia or sclerosis of the cervix uteri and scirrhous cancer. A very simple means of settling the question is recommended—viz.: the use of a sponge tent; in cervical sclerosis it softens the tissues, in scirrhus the tissues remain hard and dense. Noeggerath's theory that areolar hyperplasia is often apt to be transformed into papilla y epithelioma finds no favor with the author, who opposes it both with argument and authorities.

Scirrhus of the uterus is so rare that Professor Thomas has met with only three cases in which the scirrhus nature was undoubted; Rokitansky, admitting that it occurs, yet regards it as extremely uncommon; and some other writers altogether deny its existence. Granting the possibility of such occurrence, still it must be remarkably rare to find cases like the six reported by Dr. Noeggerath.

In his account of the treatment of areolar hyperplasia of the uterus the following means are enumerated: Rest; general treatment; depletion; emollient vaginal injections; alteratives (local). Among the latter, such powerful and destructive agents as potassa cum calce; potassa fusa; acid nitrate of mercury, and pure nitric acid, are mentioned only to condemn their use in swabbing out the cavity of the womb. He recommends, instead, the employment of solutions of iodine, iodide of potassium, carbolic acid, chromic acid, chloride of zinc, nitrate of silver, solution of perchloride of iron, etc. In so doing he ignores the example of many writers of medical books, who follow in the wake of rather than endeavor to guide professional opinion, and often enough continue to recommend in their works certain absurd, antiquated and injurious methods long after they have themselves ceased to employ them in their own practice. This, of course, is done to curry favor and popularity with the retrogressive and so-called conservative part of the Profession.

Professor Thomas' work does not belong to this class, and in it there is no truckling to old prejudices. It is to be hoped that the strong words he has spoken on this subject will be the signal for many to discard a method not free from danger, and so barren of good results. The mild and seemingly inadequate measures advocated by the author will be found to be productive of far more good than the rude, destructive and somewhat dangerous methods of another generation.

No mention is made of the use of ergot in the treatment of this disease. It has been used with benefit in sclerosis, both of the spinal cord and of the uterus. It is possible Professor Thomas' experience with the drug in this disease may have led him to form a low estimate of its value, still the Profession would no doubt have been glad to learn the results of his observations.

The subcutaneous injection of ergot in cases of uterine fibroids would naturally suggest a trial of it in several other morbid conditions of this organ.

In speaking of Hildebrandt's nine cases of uterine fibroids, in which this treatment was adopted, to the exclusion of all others, and with marked improvement, Professor Thomas remarks: "The results obtained by Hildebrandt are so favorable that the most sanguine must be led to fear that future experience may not prove as successful. His method has, however, even now been so far tested by others that it promises better results than any other which has been employed."

The treatment of fibrous tumors is discussed in the most excellent manner; the merits of absorption, excision (by écrasement or galvano cautery), evulsion, enucleation, and gastrotomy are all duly set forth. Gastrotomy, as a last resort, offering a a chance of life, is ably and convincingly advocated.

Inversion of the uterus, with a full account of the author's original and brilliant operation, forms a most interesting part of the volume.

What position this new operation may hereafter assume, it is difficult to say. At present, though it has been performed

only twice, it seems to offer to the patient a somewhat brighter prospect than amputation, and will probably be found not more dangerous than the latter.

Peri-uterine cellulitis and pelvic abscess are separately considered. For this course the author offers a good reason, viz.: that pelvic abscess does not always arise from cellulitis; and another may be urged in this, that cellulitis does not necessarily terminate in abscess; the latter being only one mode of termination. The treatment of pelvic abscess and pelvic cellulitis, after pus has formed, especially so far as relates to the propriety of evacuating the fluid, is a matter of practical interest and importance.

Occasionally one meets with some weak brother who is too timid or too ignorant of the pathology of suppuration, and therefore shirks and discountenances the use of the knife, and even the introduction of the aspirator. The directions given by Professor Thomas and the authorities he quotes, are sufficient for the encouragement and information of such persons. "Should an abscess show a tendency to point and discharge rapidly through a favorable channel, and no distressing or dangerous symptoms show themselves, it would be the part of wisdom to await the action of nature. But even under these circumstances there is danger in delay." "Sir James Simpson relates a case which he saw with Dr. Zeigler one day, when the abscess pointed decidedly toward the vagina and rectum, very low down. Feeling sure that it must soon discharge, they left it until the next day; but before that time, to their surprise, it had burst into the peritoneum. According to the author, some minor advantages may be secured by delay, but where the patient is suffering under grave constitutional symptoms, *the pus should be evacuated if it can be certainly reached.*"

"Dr. Savage believes that puncture should be practiced early, and per vaginam. Spencer Wells declares, from an experience in opening as many as from twenty to thirty pelvic abscesses, that he has known of no fatal results. I have known, says he, several cases of death where no puncture has been made, some

of them very painful cases, when I had urged puncture and was overruled. As a rule, he punctures per vaginam."

On perusing the chapter on Pelvic Peritonitis, one misses the excellent table of differential diagnosis between peri-uterine cellulitis and pelvic peritonitis, which was given in the earlier editions. It was valuable to students and general practitioners, and on this account its omission in this edition is perhaps a loss.

In the chapter on Pelvic Hæmatocele there are but few changes, and it reäppears almost the same as in earlier editions. Two illustrations from Simpson of the peritoneal and sub-peritoneal forms of the disease have been left out, and a wood-cut of peritoneal hæmatocele from Barnes has been introduced in their stead. The table of differential diagnosis between the two varieties has been omitted in this edition. This has been done on clinical grounds. It is true that, as the author has it, a sub-peritoneal hæmatocele may break through the membrane and become peritoneal; nevertheless, as he has already shown, the two can be differentiated at the bedside, and if the transformation just mentioned should occur, it must be all the more satisfactoy to have previously made the diagnosis. He considers the sub-peritoneal variety to be comparatively rare, and doubtless it is so.

The author's treatment of pelvic hæmatocele is based upon the following rules: 1. The mere presence of a large amount of blood in the peritoneum does not warrant evacuation; 2. Incision of the peritoneum, in addition to its own inherent dangers, will always expose to those arising from the admission of air. But he says, "so soon as evidences of septicæmia are observed, the hæmatocele should be evacuated."

Professor Thomas has elsewhere so strongly insisted upon the dangers attending on the presence of blood in the peritoneum, as from hæmorrhage after tapping in ascites and after ovariotomy; and he virtually admits that septicæmia may arise at any moment in the disease under consideration. Would it not then be a safer practice to remove this danger by evacuating

the blood, or part of it, especially as this can be done with the aspirator without serious interference with the peritoneum, and without danger of the admission of air. The author omits altogether to mention the use of the aspirator in this connection.

The limits of this review have already become somewhat extended. Several excellent chapters justly claim the attention of the reviewer. Among these, one devoted to ovarian tumors, and embracing 114 pages, is particularly deserving of notice. Indeed, it would be impossible to find in medical literature the same amount of space more crowded with important and interesting material so admirably arranged and so clearly and impressively presented. This chapter is fully abreast of the present time in every thing relating to ovarian tumors and ovariotomy. The author's original operation of vaginal ovariotomy forms a very interesting part of it.

In conclusion, the remarks in the beginning of this article must be repeated: Professor Thomas has aimed to make, and has thoroughly succeeded in making, this work the most practical, most faithful, and therefore the *best* exponent of the most advanced condition of gynæcology. J. A. O.

MISCELLANEOUS.

"Non omnes eadem mirantur ament que."

"*Shadows from the Walls of Death*"; Facts and Inferences prefacing a book of Specimens of Arsenical Wall Papers, gathered by R. C. Kedzie, M. D., Member of the State Board of Health of Michigan.—The above is the rather sensational title of an interesting and instructive paper upon an important subject. The danger attendant upon the use of paper-hangings colored green with arsenical pigments (Scheele's green and Sweinfurt green—arsenite and aceto-arsenite of copper), is not

so well known, either to the Profession or to the public, as it ought to be. The State Board of Health of Massachusetts sounded the alarm in 1872, by the publication in its annual report of an able paper "On the evil effects of the use of Arsenic in certain green colors," by Dr. F. W. Draper. The State Board of Health of Michigan now utters a similar warning, through this paper of Dr. Kedzie, and the acompanying book of samples of poisonous wall-paper.

"Perhaps," says the author, "we could not devise a more effectual way to contaminate the air of our houses with a small amount of arsenical dust, than by the use of wall-paper colored with arsenical preparations. The large amount of surface exposed, the feeble adhesive power of the size by which the pigments are fixed, the frequent alternations of heat and cold, moisture and dryness, by which the adhesiveness of the size is still more diminished, the currents of air always circulating in a warm room; mechanical displacements by sweeping, dusting, etc., all combine to dislodge the pigments from their position on the paper, and to scatter them in the form of a fine dust in the room, and this dust may be many hours or even days in settling. * * * This suspended dust is swept along with the air in inhalation, and is lodged upon the mucous surface lining the nasal cavities, the windpipe and its ramifications. * * * This may explain the frequent occurrence of catarrh and bronchitis in those persons who occupy rooms prepared with arsenical wall-paper."

Dyspepsia, neuralgia, pains in the bones and joints simulating chronic rheumatism, headache, general debility, etc., are also enumerated as symptoms which often attend this insidious form of poisoning; their occurrence being readily explained by the absorption of the poison. Want of space, however, preveats our going into a full consideration of the subject, and we content ourselves with the citation of two or three of the cases which are reported by Dr. Kedzie as having occurred under his own observation, or within his knowledge.

1. Dr. J. H. B. and his two boys. The Doctor's bed-room

was papered with wall-paper of a grayish color, toned with green, and had a few bright green flowers or leaves. His boys occupied a bed-room next to his, and the door between the rooms was open at all times. The Doctor was troubled with severe pains in the bones, symptoms of chronic rheumatism, and constant cough. The boys became affected with pains and rheumatic soreness. Suspicion was aroused that the wall-paper might be the cause of this illness, and the paper was analyzed, when it was found to contain 5.47 grains of arsenic to the square foot, or six ounces of arsenic on the walls of a single room. * * * The paper was at once removed, and the Doctor and his boys entirely recovered.

2. The children of the Hon. L. D. W. Emma, aged nine, occupied a bed-room, the walls of which were covered with paper of a greenish stone color, with bright bands of green. Soon after occupying the room, she exhibited the following symptoms: Lameness, resembling rheumatism, darting pains in various parts of the body, languor in the morning, feverishness, pains in the head and frontal sinuses, sores in various parts of the body, "faint spells," and great loss of flesh. The best medical advice that could be procured was obtained, but no essential improvement followed. Whenever she left home for a time her health improved, but she relapsed into her former condition on returning home. The paper on the wall was analyzed, and found to contain 4.87 grains of arsenic to the square foot. Emma was removed from the room and entirely recovered her health.

3. Last fall, the son, Herbert, was allowed to occupy the same room. In a short time all the distressing symptoms which had afflicted Emma, were developed in Herbert. He was removed from the room and entirely recovered.

4. Mr. H. had his house papered with wall-paper which contained a considerable quantity of green. Soon after, Mrs. H. and all the children passed into a condition of continued ill health. The time of the commencement of this ill health was so nearly identical in all the cases, and the symptoms were so

similar, that Mr. H. was convinced that there was some common cause operating on his family to cause this mysterious sickness; but he was unable to find anything in the condition of his home or its surroundings which would explain it. While examining the report of the State Board of Health, his attention was called to poisonous wall-paper as a possible cause of ill health. The wall-paper in his rooms was analyzed, and found to contain 1.88 grains of arsenic to the square foot. It was at once removed, and Mrs. H. and the children recovered their usual good health.

These cases require no comment. But as *all green wall-papers do not contain arsenic*, it is well to mention the ready method of distinguishing those that do. "The green arsenical colors are readily soluble in ammonia water. If a little ammonia water poured on the paper discharges the green color, or produces such a change in the color as indicates the removal of green, the paper should be rejected, as it probably contains arsenic. To identify the presence of arsenic in any paper, wet the paper with ammonia water, pour off this water on a clean piece of glass, and drop into it a crystal of nitrate of silver, or a small piece of lunar caustic. If a yellow precipitate forms around the crystal, it indicates the presence of arsenic." L. S. J.— *Va. Med. Monthly.*

Pullman Cars in England.—We have before mentioned that the Midland Railway Company, which seems to be in all respects more progressive than the other leading English railway corporations, has introduced Pullman cars, and we are glad to see that their merits are appreciated. An English paper says, "A few days ago several 'railway men' and others, took a journey to Bedford in the new Pullman drawing-room sleeping-cars, which have been built in America for the Midland Company. The verdict is very much in favor of the cars, and decidedly against the companies who decline to put them at the service of travellers. The carriages are so well mounted that oscillation is reduced to a minimum, and they are so cosily and

comfortably fitted that certainly a moiety of the inconveniences of travelling are eliminated from the Pullman car. The arrangements for the sleeping-berths are ingenious, and all that could be expected in a vehicle of the kind."—*Boston Journal of Chemistry.*

Artificial Fertilization of Plants.—A new process for facilitating the fertilization of plants has been tested with success in the Botanical Gardens of Vienna. It consists simply in touching the end of the pistil—that is, the stigma—in a flower, with a pencil dipped in honey, or, better, in honey having mixed with it some pollen of the plant operated upon. A *Hibiscus Mexicanus* which had never yielded fruit, having undergone this treatment, produces quite a large quantity of good seeds. With several fruit-trees the process also succeeded. Further, after operating on certain branches only, of trees which did not yield fruit, it was found that fruit formed on these, while the branches left in the natural state gave none. The effect, if real, may be explained by supposing that the honey retains the pollen-grains on the stigma, and thus favors the formation of a pollen tube, which is indispensable to the fertilization.—*Exchange.*

Sewage and Peppermint.—According to the "Bulletin Thérapeutique," an attempt made by a Paris merchant to utilize the sewage of that city in the cultivation of labiate plants in the plain of Genevillers has been so successful, that at the present time three hectares of land (7½ acres) are devoted to the raising of peppermint alone. The plant is said to grow with such vigor that three collections are made in each year, whilst the essential oil obtained from it by distillation is asserted to be superior in delicacy of aroma and flavor to that imported from England. So satisfied are the directors of the Pharmacie Centrale with the results, that they express their readiness, should any pharmacien be sufficiently enterprising to extend the experiment to the neighborhood of the manufactory at St. Denis, to undertake to use all the produce.—*Boston Journal of Chemistry.*

Fowler's Freckle Lotion.—Some time since, an advertisement appeared in the "Ledger," one of the newspapers of this city, in which it was stated that several Louisville physicians (their names being given) approved of the nostrum above mentioned. As these gentlemen had only stated that the ingredients used were harmless to the skin, the use made of their names was wholly unwarranted and unwarrantable. As the editor of this Journal was one among those whose opinion had been sought and given, he at once addressed a note to Mr. Fowler, the compounder of this lotion, calling his attention to the newspaper advertisement mentioned. He was assured promptly, in writing, that the notice had appeared without the knowledge or consent of Mr. Fowler, (Druggist Preston Street, Louisville, Kentucky), and that this fact would be publicly stated. Whether this has ever been done or not, is not known, but this notice will correct any unjust impressions created by the advertisement described. The names of the physicians given are as follows (quoted from memory): Duff Child, B. M. Wible, W. H. Galt, E. D. Forée, L. D. Kastenbine, W. T. Leachman, and others. This notice is due to these gentlemen, and is given with pleasure.

THE PHYSICIAN.

Enscons'd in an elbow chair,
At a table with pens and ink,
With plenty of time to spare,
And uninterruptedly think;—
With hair fast turning gray,
And clothes in seedy condition
I found, as I called (feeling ill) one day,
A regular-bred physician!

Grave and sad was his look,
Betokening care and grief;
He was reading a medical book,
And I spied a tear on the leaf!
No waiting-room fill'd with the sick,
No carriage stood at his door,
The clock in the lonely hall went *tick*,
Sad emblem of many things more!

He smiled as I cross'd the room;
For the hope, perchance, of a fee
Dispell'd for awhile his gloom,
As he steadily gazed on me.
He discern'd in a moment my case,
With exquisite skill and knowledge,
And I thought his position a sad disgrace,
For a Fellow, perhaps, of the college!

Mental worry and toil!
Patient research and thought!
Gallons of "midnight oil!"
What returns have ye brought?
To wait till patients come,—
To sit till somebody sends,—
To find and feel how narrow the sum
Of patrons, patients, or friends!

Read—read—read—
Till your brain is ready to burst—
'Tis a chance if you ever succeed,
Though a "wrangler" or a "double first!"
Walk hospitals all day long,
Win every medal and prize,
It is "labor lost," for the senseless throng
Your labor of hope despise.

Such were the thoughts that cross'd
My mind, and it gave me pain
To think how talent is lost,
How science is all in vain—
To see how rank and how wealth
To Quacks and Pretenders fly,
And risk their lives at the game of health,
And pass the Physician by!

Last week, on going to town
To seek his advice once more,
Alas! all the blinds were down,
And I found two mutes at his door!
Regretted—beloved—respected—
He had died in his zeal to save;
And friends who so blindly his talents rejected,
Now weep, too late, o'er his grave.

The Lancet, 1834.

New Mode of Administering Raw Meat.—Dr. Yvan gives the following method of preparing a palatable mixture having

all the virtues of fresh meat while possessing an agreeable taste: Raw meat (fillet of beef), 250 parts; sweet almonds (charred), 75 parts; bitter almonds, 50 parts; white sugar, 80 parts.

The mixture is to be rubbed up slowly in a mortar until a homogeneous paste is obtained, adding from time to time a sufficient quantity of water to give a proper consistency. The amount of water may be so varied as to give a solid or a liquid mixture. The liquid, which is in the form of an emulsion, will slowly settle, but may easily be mixed again by shaking lightly. It may be preserved unchanged for a long time if kept in a cool and dry place. In order to render it more nourishing, the yolks of one or more eggs may be added.

Arsenical Poisoning by Articles of Dress. — The following case of arsenical poisoning, reported by Mr. R. R. Cheyne, of Nottingham Place ("British Medical Journal") from wearing a ruby-colored merino tunic, is entitled to attention as a warning against this too confident use of articles dyed red with coralline dye.

T. B. M., aged two years and four months, after some indications of disorder and a few restless nights, vomited several times on October 1st, and had slight diarrhœa. Vomiting after food continued until the 6th, when it ceased until the 13th. During the same period, there existed depression, anorexia, now and then tremor, or a kind of quivering of the muscles, once a screaming fit in the night (as if from fright), and a state of extreme irritability, with frequent micturition. The degree of illness in the child thus far seemed to be out of all proportion to any discoverable local lesion. On the sixth of the month, however (the day on which the vomiting subsided), he awoke agitated, and, after a warm bath, a rubeoloid rash appeared, succeeded by a cough, which day by day became more troublesome, being most severe between 3 and 6 A. M. The eruption was capricious as to its extent and duration, leaving, when absent, a mottled look on the skin, which was

also stained by the red dye drawn out of the tunic by the very profuse perspiration characterizing the disorder. It was this latter circumstance, with the facts, now observed, of the recurrence of the vomiting not long after the tunic (which had been left off for several days) was again worn, that led me to the discovery of the real wolf in lamb's clothing with which I had to contend. Upon inquiry, I learned that this ruby-colored merino frock was first put on September 24th, and was laid aside on October 26th, when the little patient was strictly confined to bed. For the week following, there was exemption from sickness; and then (two days after the use of the tunic was resumed) the stomach again rejected food. It seemed likely, therefore, that the gastric disturbance was in some way excited by wearing that particular garment; and if, as I imagined, the existence of arsenic therein could be proved, the case and its treatment would become plain. Of course, the needed proof was now sought, the merino in the process being committed to destruction.

Decided amelioration of the symptoms followed at once. The vomiting did not recur, the cough subsided, the eruption, less diffused, took the form of patches of erythema, and the perspiration soon diminished. Yet the progress toward recovery was very slow. At the end of the month, there was still but little power of taking food, and an appearance of cachexia, in marked contrast to the fair condition of health presented by the child upon his return from the country a few weeks since. It is to be hoped that a careful tonic treatment, and a stay for some time at the seaside, may do much to repair the mischief and restore the constitution.

It will be noticed that this case did not present all the symptoms sometimes observed ("Taylor's Medical Jurisprudence") in similar instances of arsenical poisoning. Thus there was no conjunctival irritation, etc. The salient points of the case were depression, sickness, anorexia, profuse perspiration, eruption, cough, nervous irritability, and frequent micturition, leading to and leaving a cachectic state of constitution.

In the following report of Dr. Dupré, reference is made to a cherry-colored cashmere frock, as well as to the one now in question, of a ruby-color. The former had been left off last May, and, therefore, has no relation to the present inquiry. Still it may be supposed that, before the washings to which it had been subjected, it, too, contained more traces of arsenic. Dr. Dupré's report is as follows :

I have carefully examined the little frocks you brought to me some time since, with the following results. Both frocks are dyed with one of the red coal-tar colors; this particular one is called coralline, I believe. The color of one frock was tolerably fresh and dark; from the other frock, a great part of the color had apparently been washed out. The darker one contains 0.048 grain of arsenious acid per square foot. The paler one also contains arsenic, but in excessively minute traces only.

The evidence I have adduced in the above case clearly, I think, confirms the statement that red, no less than green, colors in articles of dress may contain arsenic, any arsenical mordant being often used to fix the coralline dye, and as such are highly prejudicial.—*Gazette des Hopitaux.*

Green and (it thus appears) red wall-papers, artificial flowers, linings of caps, cakes, sweetmeats, covered with arsenical green, or packed in arsenical paper, French plums, figs, and other fruits, similarly packed, and other miscellaneous articles, have all been sources of arsenical poisoning. It is also well known that the process of manufacture has a most unwholesome influence, and is fraught with danger to those employed. The question, then, may, with all earnestness, be asked, are the facts of the great competition in trade and the excessive desire for rich and beautiful colors in the decoration of our homes, etc., sufficient reasons for disregarding the painful lessons of experience? Undoubtedly, there is great ignorance, if not criminal recklessness displayed upon this very important subject.—*News Abstract.*

Treatment of Piles and Prolapsus of the Rectum by Injection into the Rectum of Extract of Ergot.—Dr. G. William Semple, of Hampton, Va., reports ("Virginia Med. Monthly") the case of R. M. B., whom he operated upon for piles in 1868 with the écraseur. "The disease began to return in eighteen months, and increased to such an extent, accompanied by prolapsus of the rectum, that for three years there had been a considerable loss of blood every day, and it had been necessary that he should lie down after each evacuation of the bowels to await the return of the prolapsed rectum, when, on the 8th of April last, I operated on him by the application of nitric acid. This, contrary to my usual experience, produced violent pain and irritation of the neck of the bladder, requiring for three days large and repeated doses of morphia.

"After healing of the slough, the piles still continued to bleed and to be painful, but the patient was unwilling to submit to further operative procedure. Having at the same time under successful treatment, by ergot, a mammary tumor, and my attention having been called to the relief of varicose veins by the hypodermic injection of ergotin, and remembering that in several cases of imperfect involution of the uterus, in which I had successfully prescribed ergot in combination with sulphates of quinia, iron, and strychnia, and extract of cannabis indica, in which piles coëxisted, they also had been cured, I ordered the injection of ℥ss. of the fluid extract of ergot, with ℥ss. of water, into the rectum after each evacuation. Though the patient has been irregular in pursuing the treatment, he has since seldom had any discharge of blood or suffered any inconvenience, and now considers himself cured.

"On the same day (May 1) this prescription was made, B. H. L., convalescent from typho-malarial fever, who had suffered with piles and prolapsus of the rectum for fifteen years, daily losing blood, and being obliged to lie down after every evacuation to await the return of the prolapsed part before resuming his work, called on me for advice. Ordered the same treatment, which he pursued steadily. At the end of six weeks, having

had but one discharge of blood, he felt himself well, saying he was a new man.

"This patient's spleen had been greatly enlarged for many years, and that, much to my surprise, was reduced to its normal size by the treatment.

"I have since prescribed the same treatment in three other cases of piles, all of which have been cured. One of the patients was a pregnant woman. No labor-pains were produced or inconvenience felt."—*News Abstract.*

Iodoform.—Mr. Berkeley Hill has, during the last twelve months, employed iodoform extensively at the University College and Lock Hospitals, as well as in private practice. His experience coïncides in the main with that of Profeta and Parona. He has employed iodoform hitherto only as a dry powder, for serpiginous sores of all kinds, as well as for spreading chancres. The iodoform appears to irritate suppurating wounds where there is no specific contamination. For example, iodoform was used in a case where the prepuce had been circumcised in order to gèt at the chancres underneath. Iodoform was at once applied to the chancres, and, as soon as suppuration began along the circumcision-wound, to that also. But the patient complained much of the pain when the inflamed surface was so treated, while none was felt at the chancres, which, moreover, did not inoculate the circumcision-wound. One of Mr. Hill's cases was even better testimony than that of Profeta. The patient, a gentleman, had suffered from serpiginous chancre of the foreskin for twelve months, by which a circular ulcer had distroyed a considerable part of the sheath and all the prepuce but a nodule of œdematous tissue connected with the frænum, and was invading the glans. Nitric acid, acid nitrate of mercury, sulphuric acid paste, and the actual cautery, were all freely employed on several occasions, under chloroform. The patient took mercuric vapor-baths also for a considerable time, sufficiently often to maintain sponginess of the gums and fetid breath. No further effect than temporary arrest of the phagedenic action and its attending pain followed each cauterization.

Iodide of starch was then regularly applied. This checked the eroding action, and subdued the pain, but did not produce granulation; and, after a fortnight's trial, it was replaced by iodoform. Then healing began in three days, and continued rapidly without a check, until in a fortnight a sound cicatrix had replaced the angry ulcerating surface. The patient has remained perfectly well to the present time, eleven months.—*London Medical Record.*

Animals as Motors.—M. Marey, to whose work on "Animal Mechanism" we alluded last month, has laid before the French Association for the Advancement of Science some interesting observations on the employment of animals as motor powers. He proves by means of very elaborate instruments that the movement of animated beings as motor powers takes place by jerks, whence result shocks, and consequently a waste of labor. As an illustration of this theory, M. Marey cites the effort necessary to draw a burden behind one. If the necessary force be transmitted by means of a rigid or almost unextensible strap, for instance, of leather, the movement is jerky and more difficult than if it were transmitted by an elastic strap. It would therefore be better to attach horses to the shafts with india-rubber traces. He also gives as an illustration the manner in which boats are always dragged along the towing-paths by long ropes. It would be impossible, or at least very distressing, to employ short ones. The length of the rope, which alternately tightens or slackens by slow oscillations, has in this case the same effect as india-rubber.—*Ex.*

Pruning and Photography.—An Italian correspondent of the "Philadelphia Photographer" describes a novel application of photography. He had some fruit-trees that needed pruning, and there was no one in the neighborhood who could attend to the work in season. He therefore photographed the trees, and sent the pictures to an experienced pruner in Turin, who returned them after marking where the branches were to be cut. The artist then pruned the trees himself, following the photographs.—*Ex.*

MEDICAL NEWS.

'Nulla dies sine linea."

Sir Henry Thompson, in consequence of the pressure of private practice, has been led to resign his post of Surgeon to University College Hospital and his Professorship of Clinical Surgery in the College.—*Exchange.* ——— By royal decree, female students in Sweden are to be admitted on the same terms as males to all the examinations in the universities, except those for the licenses in theology and law.———A correspondent of the London "Chemist and Druggist" says that paste is kept moist and specially sweet and free from smell by mixing glycerin with it in the propotion of about one teaspoonful of glycerin to half a pound of paste; according to another authority, glycerin is antiseptic, one part to ten of water preserving animal substances equal to spirit.—*Exchange.*——— "Funerals furnished and conducted for the trade" is the rather singular announcement made by a London firm in a local journal. ———*Improved Metallic Crows' Nest.* — The substitution of metallic for vegetable substances in constructive works has been going on among mankind for a considerable time and with accelerative force, and the movement appears at last to have spread to the lower animals, as, at the March meeting of the Asiatic Society of Bengal, a crow's nest was exhibited, which was constructed of pieces of thin telegraph wire, very ingeniously interwoven, and it was stated that similiar nests, and others made of soda-water-bottle wire, were not uncommon in the vicinity of the telegraph store yard. The English journal "Iron" is our authority for this bit of Orental news.—*Boston. Jour. of Chemistry.*———*Reform Medical Society.*—Few of our readers are aware of the existence of a "Reform Medical Society" in San Francisco. It is a very harmonious institution, consisting of one member, an erratic genius not devoid of of smartness, belonging to the O'Donnell family.—*Pac. Med. and Surg. Journal.*———*Homœopathy.*—Any man who can believe that smelling a piece of chalk will produce a sen-

sible impression on the body which will last for several weeks—and every honest follower of Hahnemann must believe this—is fit for no other purpose than the practice of homœopathy. He must be born again before he can enter the ranks of rational medicine.—*Ibid.*———*To Remove Foreign Bodies from the Ear.*—Take a number of horse hairs, and doubling them in a loop, introduce the loop gently in the meatus as far as it will go, then turn it and withdraw it. One or two repetitions of the process will commonly bring out the foreign body, and without pain or injury to the ear. The patient lies on his side.—*Cincinnati Clinic.*———The excellent review in this number is contributed by Professor John A. Octerlony, M. D., of Louisville, Kentucky.——— *Compression of the Left Subclavian Artery.*—On the 2d instant, Mr. McGill, of Leeds, performed an interesting operation in a case of left subclavian aneurism, by cutting down upon the first part of the left subclavian artery, and compressing it for ten hours and a half by means of torsion forceps.—*Lancet.*———The "Glasgow Herald" states that the death-rate for the week ending Saturday last was as high as 59 per 1000 annually.—*Ib.*———The mortality in London last week amounted to 2442 deaths.—*Ib.*———It is intended shortly to establish a university in Adelaide, Australia. Funds necessary for the endowment have already, thanks to the donations of the public-spirited colonists, assumed very handsome proportions.—*Ib.*———The Southern Dental Association will hold its next annual meeting at Memphis, Tenn., on the 9th of February.———*Poisoning by Belladonna.*—A Mrs. Susana Bowling died at Baltimore recently from the effects of a dose of belladonna which had been purchased from a druggist for syrup of senna.—*Med. Record.*———A physician at North Guilford, Conn., recently attempted to collect a bill of $50 for professional services, when it was offset by a formidable bill for dinners, horse baitings, presents of milk, fruit and vegetables, all of which had been tendered ostensibly out of good will. Strange to say, the patient's offset was held valid in a New

Haven Court, and the doctor had to pay $7 to get square.—*Ex.*
———The bleeching of bones and ivory has been rapidly and successfully carried out at the museum of the Jarden des Plantes, by immersing the articles in spirits of turpentine, taking care that they are kept at a short distance from the bottom. When treated in this manner and exposed to sunlight a few days, it is said, are sufficient to free bones from their fat and disagreeable odor, and render them beautifully white. Woods of different kinds may also be bleached in this manner. The necessity of keeping the articles from touching the bottom of the vessel is on account of the formation of an acid substance which collects at the bottom of this fluid, and is capable of attacking the substances being bleeched.—*Ex.*———*A Handsome Medical Fee.*—Dr. Waldau, of Berlin, assistant of the late Von Graefe, received 25,000 thalers from the banker Bleichroeder, for a contract operation.—*Ex.*———Drs. Chase and Clapp, of Boston, have been expelled from the Massachusetts Medical Society, for practicing homœopathy.———Scarlatina still continues with great severity in Providence, R. 1.——
Physicians Accused of Robbing Graves.—Some excitement has been caused in Terre Haute, Ind., by the arrest of Dr. W. H. Meyers, a prominent physician, Dr. N. Meyers and Dr. H. V. Werengen, on the charge of robbing a cemetry at Van Wert, Ohio, in December last, of the body of Carl Wolf, a German emigrant, who committed suicide.

EDITORIAL.

"Nullius addictus jurare in verba magistri."—Hor.

BREVITIES.

It is a pleasure to further call attention to some of the older and better medical journals of this country. The "Atlanta Medical and Surgical Journal," under its present and recent

management, has become one of the most useful and valuable of the exchanges. Its present editors, Drs. Robert Battey and W. F. Westmoreland, are widely and most favorably known, and are conducting their journal in an admirable and progressive manner. They deserve success, and the Journal bears every evidence of having already accomplished a success far beyond that usually attained by American medical periodicals. ———The Cincinnati journals are manifesting the good results of a friendly and useful rivalry. Now and then there is perhaps a spirit of unkindness toward each other, but this is occasional, and no one doubts but that the words uttered are regretted long before the ink of the press is dry. The "Lancet and Observer," a monthly octavo, is receiving, since its purchase by Dr. J. C. Culbertson, its present editor, much care, and shows the results of earnest labor and commendable energy. The editor writes sometimes of his local brethren unpleasantly, but he has probably, in his own judgment, reason for so doing. He will see this error and eliminate it from a work that will yield him abundant honors in return for his labors. The "Lancet" is one of the oldest journals in this country, and its record is a source of just pride to its founders and previous managers. Stevens did good work in this field, and reaped deserved honors and success. The present editor will equal, if not surpass, him, provided he continues to give to his journal the labor and energy expended upon it during the past year.———The "Cincinnati Clinic" is a weekly, and has reached its eighth volume. Its editor is Dr. Jas. T. Whittaker, and its assistant editor is Dr. James G. Hyndman. This work has achieved success, and a success marked and rapid. It was an experiment; a Western weekly. It is an evidence of the fact, that the West is equal fully to every demand which is made upon it. The "Clinic" is published with great sprightliness, and its columns are enriched with the most valuable original and selected matter. It is a pleasure to see evidences of its increasing popularity and success. Like the "Lancet," it occasionally (perhaps too often) "shows its teeth," but those who know

the genial Cincinnati Doctors can not but feel that this exposure is oftener a smile than what it purports to be—a something disagreeable. Bury the hatchet; smoke the calumet. Buy inkstands (gentlemen of the Cincinnati medical journals) with this beautiful sentiment in raised letters upon them, "Pax et Scientia."——The "Cincinnati Medical News" is a monthly octavo of 56 pages, published for $2 a year. Its editor is Dr. J. A. Thacker, and the associate editors Drs. D. D. Bramble, A. J. Miles, and R. C. S. Reed. It has reached it eighty-fifth issue, and has steadily, during this period, improved in size, value, and attractiveness. It has a wide circulation and is justly valued. It has recently been enlarged and improved, and contains a valuable Microscopical Department. As no microscopical journal is issued in this country, this feature will necessarily give it increased value.———*Errata.*—On page 20 of Jannary issue (in the article by Dr. Weatherly), tenth line from the bottom, read "prescription" instead of supposition; and wherever ext. hyoscyamus is printed in that article, read instead "hydrate of chloral." On page 104, line 4 (of same number of Journal), instead of "bled half a pint from the arm," read bled half a pint from the nose. The author would not, of course, have bled a patient already bleeding to death.——In the list of contributors, in the last index published, the name of Dr. R. L. Payne, Lexington, N. C., was unfortunately omitted. The correction is made with pleasure, though no one can forget that he is a contributor to this work.———"What's in a name?" or W. W. and W. O. The review of Van Buren and Keyes' work on Syphilography, published in the January Journal, was contributed by Professor W. W. Dawson (of Cincinnati), and not by "W. O.," as printed. As, of course, this change in the initials increases much the value of the review, this correction is promptly made. According to the philosophy of Juliet, "a rose would by any other name smell as sweet," but the philosophy accepted in the realms of sentiment is manifestly unacceptable in the domain of syphilography; and a review by W. W. is unquestionably very different from

one by "W. O." Besides these weighty reasons, the accomplished reviewer can not be allowed to suffer in public esteem by having it supposed that he could possibly endure the unattractive designation, "W. O.," when he rejoices in the possession of the euphonious appellation, W. W. It is safe to say, that when this is read, the review mentioned will be reëxamined immediately, and with far different interest and advantage. While the unhappy Psalmist may very naturally have said "W O is me," it is a source of great pleasure to know that the excellent Cincinnati Professor is not thus miserable.

To EDITORS.—The following excellent suggestion deserves universal adoption. This Journal will adopt the rule rigidly, and it will also be adopted in the management of the "American Medical Weekly."

"There is one thing which, as journalists, I would be glad if editors would unite in condemning and discountenancing. I have received over six hundred postal cards and letters, not accompanied by the price of specimen copy, with some modification of the stereotyped expression, 'Please send me specimen copy of your journal, as I wish to subscribe to some good journal,' etc., from which class of letters, when the requests have been granted, scarcely postage expenses have been received in return because of subscribers thus obtained, while I know of no instance in which the party sending the cash for specimen copy has not afterward—generally by return mail—become a subscriber. These *postal-card* specimen-copy orderers, as a class, are cheats and great nuisances, and can be broken up only by concert of action. If, as journalists, we will pay no attention to such orders unless accompanied by the cash, we can break up this petty form of petty stealing from the pockets of editors. Will you unite with me in adhering strictly to the rule not to supply such postal-card orders from irresponsible parties, and state in advertisements that we may make, that specimen copy orders will not be attended to unless accompanied by the cash?"

RICHMOND AND LOUISVILLE

MEDICAL JOURNAL.

VOL. XIX. MARCH, 1875. No. 3.

ORIGINAL COMMUNICATIONS.

"Qui docet discit."

ART. I.—COMPARATIVE THERAPEUTICS. By GEO. E. TRESCOT, M. D., of Greenville, S. C., late Professor Matera Medica and Therapeutics in the Medical College of the State of South Carolina.

"We think according to our nature; we speak according to our instruction; but we act according to custom."—LORD BACON.

It has been well said that true knowledge is the interpretation of nature, and thus it requires both the interpreting mind and nature for its subject; both the document and the ingenuity to read it aright. These words from the introductory chapter of Professor Whewell's great work on the History of Inductive Sciences have struck me as peculiarly applicable to those who are trying to study out the mysterious problem of health and disease, with the hope of being able to offer some rules by which the one may be retained and the other relieved. They may serve as a bridge by which we can pass to and fro between the labors of such men as Stricker, Virchow, Robin, and Beale on the one hand and Graves, Trousseau, Niemeyer, Bennett, and Wilks on the other. Physicians who, twenty years ago, received their diplomas feel that very many of the physiological and pathological views held and taught at that time have

undergone considerable change; some simply amplified or modified, others almost entirely given up, or if still held, only held because as yet no better explanation of the phenomenon they were intended to elucidate has been offered. By these changes in physiological and pathological teachings, the treatment of disease has been much affected, and we are obliged to confess that our therapeutical art has not been accompanied with the happy results we might reasonably have expected. I think that it will be granted that amongst intelligent physicians the vast majority are guided in their treatment more by their acquaintance with the nature and course of disease, than by accurate information concerning the action and utility of the medicines they administer.

Osterlen in his Medical Logic says: "If we bring to the bedside of the same patient a disciple of Brown or Broussais, an empiric of the old, or one of the modern stamp, an adherent of the so-called Vienna anatomical or the Giessen chemical school, a nerve pathologist or a blood pathologist, each will recognize a different state of things." Such an admission, if made before those unacquainted with medical science, is calculated greatly to mislead; in the first place it is not altogether correct; for in many cases the thing recognized is the same, the difference being in the reasons assigned to account for what has happened. Again, one of the great truths of modern clinical medicine consists in this most important fact, that while two physicians may offer very different reasons for the why and how of any given case, they may yet be in accord as to the best means to be used for the most speedy restoration of health. Now I would ask, is there really a greater diversity in the opinions and teachings of medical men than in other departments of science or knowledge? I answer, no. Turn to geology, natural history and the physical sciences, branches of learning which in popular estimation have reached such a high degree of certainty and perfection; separate in these the actual facts known from the theories offered to explain them, and I think we will find as much diversity as in our own Profession. The question of

origin of species, antiquity of man, successive formations of the earth's strata, vitality versus materialism, and a host of others will immediately occur to our minds as offering as wide a field for speculation and as fair a chance for dogmatism as any question that can possibly arise in the study and practical application of medicine. We live essentially in an age of comparison; every new theory is compared either with some recognized authority or else with the current views held in regard to the subject for which the theory has been announced. Every thing bearing directly or indirectly on the question at issue is submitted to a most careful and exact investigation, and the new theory, no sooner is it born than it finds itself exposed to all those forces which tend to its destruction. If it survives it must do so by its own inherent vitality. It has occurred to me that it might prove interesting to the older members of the Profession, and instructive to the younger, if the treatment of disease could be submitted to this process of comparison, and an effort made to see in what points, so far as the remedial power of drugs is concerned, the established authorities of different countries are in accord; in what particulars they differ; and whether, when a difference does exist, it arises from diverse views in regard to the action of medicines or from physiological and pathological premises.

I am fully conscious that to write even a small volume on comparative therapeutics would require a far more extensive acquaintance with medical literature than I can pretend to, but I trust what I shall attempt will be of some service to the large number of country practitioners who, however really anxious they may be to keep up with the literature of their Profession, find no time to do so. Several years' experience as a teacher of materia medica and therapeutics has convinced me that one of the most difficult branches for a professor to teach accurately, and for a student to master correctly, is the one, as far as the public is concerned, of the most importance, namely; the power of the physician by means of drugs to cure disease. The first difficulty we meet with in any attempt to propose a

useful survey of comparative therapeutics is one of great moment, it is simply this; whom are we to acknowledge as established authorities and accept as our guides? When we consider the number of volumes daily issued and add to these the journals of reputation, we may well pause and reflect most carefully before we determine who shall be our teachers. Tyndall tells us that if the atmospheric space was swept clear and the sky-matter collected, a gentleman's snuff-box would take it in, and so I think for the positive facts in therapeutics we shall, without much trouble, find something to hold them. If an ardent believer in drugs confronts me with the ponderous volume of Pareira, I apply the exceedingly sharp acid of Bennett's fifteen remedies and Rogers' "Present State of Therapeutics;" if on the other hand a firm advocate of the vis medicatrx naturæ brings to my notice the mint-water treatment of rheumatism by Grail and Sutton, I ask him to account for the effect of quinine in malarial fever, arsenic in certain skin diseases, and digitalis in some affections of the heart. I would state most distinctly that I am a firm believer in the power of drugs to relieve in almost every case and to cure in some; it is because I do believe in the value of drugs that I have been moved to add my mite to the better understanding of a subject surrounded with great difficulty and liable to great abuse. There are several essential points to be determined before any one can speak with authority in regard to the treatment of any given disease, they are these: (1) a correct diagnosis; (2) a knowledge of its natural course; (3) a fair average acquaintance with the prominent views held as to its pathology, and some definite idea of the theories offered to explain the action of the remedies we use to control it; (4) a sufficient practical experience at the bedside to justify a conclusion as to the efficacy or non-efficacy of drugs. Those who have had much experience in the treatment of disease will know that the very first step we are called upon to make is often the most difficult; for diagnosis is by no means so simple an affair as many conceive. Let the candid physician face this truth and ask

himself this question, how often at my first visit to a case do I come away perfectly satisfied that I know exactly what is the matter and what will happen in the next twenty-four hours? I venture the assertion that many a time he feels that it is impossible to be absolutely certain, although he knows it is easy to speak with confidence. Fortunately, however, the very class of cases in which we can do most by medication is that which gives us most time to determine what we have to treat. There are obvious exceptions to this rule, but nevertheless the older one grows and the more he gains by observation and study, the more he becomes convinced that in acute specific disease, as far as cutting short the disease goes, medicines have little power. Junior practitioners and advanced medical students are fascinated with the pages of a journal where they can read such announcements as, fifty cases of typhoid fever treated with the mineral acids, thirty cases of diphtheria treated with the sulphites, quinia a specific in scarlet fever; but the man who has thought for himself and seen with his own eyes soon finds out that startling titles are often followed by incorrect reasoning and false conclusions. When we consider the real difficulty which so often exists in forming a correct diagnosis, it is fearful to think of the number of young men who are annually turned out from our colleges, young men whose previous education is of such a nature as to make it almost impossible for them to realize the difficulties of the profession they have chosen, and in many cases even hard for them to understand the language their instructors use in trying to teach them. This is a painful subject, and one that has been well nigh exhausted. There is one hope; it is that it be forever brought to the attention of the Profession, and that at last, if not from love, at least from importunity, something will be done. It is by no means fair, however, to lay all the blame on the Colleges, they must use the raw material sent them, and if it is considered a triumph of mechanical skill to roll out a pound of cotton into thread, yards upon yards in length, so it is sometimes wonderful to see the process of transformation by which some students are con-

verted into respectable physicians. The evil traced to its source will, I think, be found to be the want of proper office-instruction. Of all professions, ours requires a most systematic and early training; the rule for our students must be "line upon line and precept upon precept."

The bearing of a knowledge of the pathological views held in regard to any disease upon its treatment, may not strike us at first as a matter of primary importance; in some cases no doubt the virtue of some particular remedy has been so well established that it stands its ground irrespective of the changing opinions of the nature of the disease it relieves. This may be well illustrated by the use of quinine in malarial fevers; we may believe that malaria acts through the blood or nervous system; we may hold with Headland that quinine is a restorative hæmatic, or with Hanfield Jones that it is a mere tonic; we may accept in good faith the remarkable researches of Binz in regard to the action of quinine on the blood corpuscles; we may even say amen to Bence Jones when he writes: "No imagination could have anticipated that this line of research into the rate of passage of substances into and out of the textures, would lead to the supposition that man and all animals possess in every part of the body the most characteristic peculiarity of the bark of the cinchona tree of Peru."

We may accept any of these views, or we may reject them all, but we will continue to give quinine in malarial fevers, with the confident belief that no matter what may be the nature of the disease or how it acts, it will, in the vast majority of cases, be of decided benefit. The value of digitalis in certain affections of the heart is amongst the most certain clinical facts; the theories of its action are about as antagonistic as the Pope and Bismarck. We know also that some morbid conditions are so generally fatal that our pathological views have, up to this time, thrown little light on their treatment; such prominently is hydrophobia, and to a great degree the uræmic intoxication of Bright's disease, yellow atrophy of the liver, and softening of the brain. We may go a step farther, and say

that in some conditions no advance in pathology will give us any hope in relieving the condition when it exists; for instance, stenosis and insufficiency of the valves of the heart. On the other hand, the immense advance made in the treatment of the eruptive fevers is due almost entirely to a better understanding of their pathology; these, with rheumatism, syphilis, and several other kindred diseases, prove the great value of most carefully observing the natural course of morbid action.

If one wishes to be deeply impressed with the part pathology takes in the treatment of disease, let him read Dr. Goodsir on jaundice, Sir William Jenner on emphysema, Niemeyer on whooping-cough and pneumonia, Liebermister and Oertel on typhoid fever and diphtheria.

It will be unnecessary here to dwell on the theories in regard to the action of medicines, for the purpose for which I write is to investigate their remedial power. I would simply remark how important is it for us to follow as best we may the views held about chloroform and ether; the place alcohol should hold as a medicine; the conditions under which a powerful substance like iron may be beneficial or baneful; or how far can we, by chemical agents, control the chemical changes of disease; and, above all, the physiological action of drugs, so that we may be able to substitute one for the other, or combine them either to intensify their action, or at the same time to obtain the full and proper value of each. A sufficient experience in the treatment of disease is so obvious a necessity before one can speak with authority as to the value of drugs, that it partakes of the nature of an axiom.

Moliére, who was very fond of satirizing our Profession, paints for our edification the scene of a young candidate standing his examination before the faculty. He is asked what he would do for a patient who had high fever, pain in the chest, and difficulty of breathing. He replies that he would give a clyster, then bleed, then purge; he would then bleed and purge again, and give another clyster. The learned faculty exclaim: "Well, well, well; worthy is he to enter our noble body." They

proclaim him a doctor, and administer this oath: "You swear to keep the statutes of the faculty with sense and judgment, and to be in all consultations of the same opinion as your senior, whether you think him right or wrong."

The treatment mentioned above was for many a long day the orthodox practice in all cases of fever and inflammation, but a gradual and steady change has been effected. The classic description of iritis, by Sir Thomas Watson (and who does not mention that name with reverence and gratitude?) and of the power of mercury to control it, is familiar to every tyro in medicine; when, however, it was found that without a grain of mercury the inflammation vanished as speedily and as surely, we looked carefully over our theories and found that they would not tally with our clinical experience. If we turn to the article, inflammation, in the Cyclopœdia of Practical Medicine, we read: "From the serious and often fatal effects of inflammation, it is of the greatest importance to endeavor to subdue the symptoms on their first appearance, that those terminations or effects we have been considering, some of which have a dangerous and often fatal tendency, may be prevented."

Again: "In all cases of active inflammation, but more especially when the constitutional symptoms are severe, general bleeding is to be employed; the abstraction of blood from the system is more especially necessary in inflammation of important organs, as the brain, pulmonary and abdominal viscera, in which diseases it forms the principal means of cure."

In the same article we read: "Mercury is a remedy of considerable power in arresting inflammation"; and in a few lines further on, "neither this nor any other remedy, however, must be permitted to interfere with blood-letting in active inflammation; mercury may assist in controlling inflammation, and render less blood necessary, but it is itself inadequate to subdue it."

In Copeland's Medical Dictionary we find more guarded language: "The treatment of inflammation must necessarily be guided by a variety of circumstances and considerations, the

chief of these refer: 1st. To the disease itself; 2d. To the individual affected; and, 3d. To the nature of the exciting cause." Again, "in order to lower general and local action, numerous agents are prescribed, according to the particulars of the case. These operate either upon the system in general, or indirectly upon the part affected, or immediately on the latter, and consecutively on the former, according to their natures and the manner of applying them. Of those which act in the first of these modes, blood-letting is one of the most important; it has been, however, very much abused, and the cure of inflammation has too generally been attempted by it chiefly or alone."

Of mercury, Dr. Copeland writes: "These effects being produced, not only is the resolution of the local morbid action thereby favored, but also effusion is diminished, and the disposition to form coägulable lymph is entirely prevented; hence mercurials employed with the view of affecting the system are most useful for inflammation of parts which give rise to albuminous exudations, and are either of little service, or even prejudicial when prescribed for inflammations of cellular or parenchymatous structures."

If we consult the two high authorities, Professors Wood and Stillé, what do we find? In his chapter on blood-letting, Professor Wood writes as follows: "There is no remedy more important than this; perhaps none which so frequently saves life. * * * * In my experience as a hospital physician, I have seen many patients past all hopes of cure, whom early and judicious bleeding would have probably saved; but very seldom one in whom I had reason to think that an abuse of the remedy had been productive of serious injury."

In regard to the treatment of inflammation, he writes: "As an antiphlogistic measure, the loss of blood holds a position far above any other agent, and it is in this capacity, moreover, that it exercises the most beneficial therapeutic influence. It may be said to be always indicated in the earlier stages, and, indeed, to a greater or less extent throughout the process, so long as it is attended with excess of vascular action."

The same distinguished writer says: "After blood-letting, there is probably no remedy more powerfully antiphlogistic than mercury. * * * Mercury is administered, and so soon as the sore mouth, indicating its effects on the system, is perceived, an amendment of the disease begins to take place, and there is a regular advance toward health under the continued influence of the remedy."

Professor Stillé says of mercury: "It is not very easy to furnish demonstrative evidence of its antiphlogistic virtue, but in therapeutical questions the convictions of competent judges must be allowed, to some extent at least, to acquire the authority which belongs to demonstration in the exact sciences. The convictions entertained of the efficacy of mercury as a remedy for inflammation are very decided and deep-rooted."

Mr. Headland, writing of antiphlogistics, says: "A double caution may be given as to the use of these remedies; they may be given in sthenic inflammation and high fever, but not in low inflammation or low fever; in these asthenic forms, half the symptoms of inflammation and fever are wanting."

I ask special attention to this last statement, for I shall be obliged to consider it more fully at another time.

Dr. Sydney Ringer writes thus: "Formerly, it was thought that mercury salts were endowed with the power of controlling inflammation, and to this end they were constantly given even to salivation; now, however, their use under such circumstances is much less general."

Dr. James Ross, in an article in the "London Practitioner," says: "The fact that any medical man should be satisfied with the theory that mercury is an antiphlogistic, indicates that therapeutics is in a very backward state. Suppose, for a moment, that the question to be determined is not what is the action of mercury, but what is the function of wind in navigation. Suppose one man maintains that its function is to cause vessels to sail, another that its function is to swamp vessels; one that it enables vessels to escape lee-shores and rocks, another that it drives vessels upon them; each of these theories

would be as conformable to right rules of philosophizing, and as true as the theory that mercury is antiphlogistic and antisyphilitic."

Dr. Anstie,* reviewing the third edition of Churchill, on "Diseases of Children," says: "And in secondary pleurisy, as it sometimes happens that bleeding and tartar emetic are not well borne, we are to fall back on mercury given to salivation. And all this is but the opening of the ball, further entertainment being provided in the shape of blisters, diuretics, and more calomel for the later stages." He adds: "How like a horrid dream it is to peruse, in this year of grace, 1870, one of those manifestoes of the by-gone school of therapeutics. In vain we rub our eyes and try to convince ourselves that it is only a dream; there stand the printed pages before us, embodying every half-forgotton barbarism of our youth."

Now, I would ask, can these widely discrepant opinions be reconciled amid these conflicting views of men all eminent in the Profession? How can we determine who is right, for it is evident that both sides can not teach the "truth, the whole truth, and nothing but the truth?" Let me endeavor to lay before my readers a synopsis of these two points—the nature of inflammation and the action of the remedies used to control it.

To the question, What is inflammation? it is by no means easy to give a definite and satisfactory reply. It is a condition more easily known by its effects than by its cause; more readily traced in its results than in its essence. How very difficult it has been to give an exact definition of inflammation can be well understood if we consult the authors who, in the last few years, have thrown such a flood of light upon this important subject. In the writings of Stricker and Cohnheim, Simon, Paget and Lister, we have most accurate accounts of the inflammatory process, the course it runs, the evils it produces, and

* None but those who have made a special study of therapeutics know the loss the Profession has sustained in the death of this eminent teacher. The manner of his death, while increasing our sorrow, only adds to his fame.

the manner in which it terminates. Rindfleisch, with all this knowledge at his command, to which must be added his own valuable contributions, tells us: "If the organism is injured or meets with any other sufficiently powerful irritation at any point, this has, as a consequence, a series of changes which we designate as the process of inflammation."

No question in medicine could be more interesting or instructive than what might be termed a geological survey of inflammation, digging down through the successive strata of previously existing theory, and tracing, step by step, the gradually advancing views of a subject justly claimed to be the starting point of nearly all morbid action. Let* me, guided by the best authorities to whom I have access, try to obtain a clear and just but condensed views of inflammation in general, and then, as it occurs in some of the most prominent tissues and organs.

Inflammation consists of a succession of changes occurring in a tissue, the result of an irritation sufficient to destroy its vitality. This injury to a part may be mechanical or chemical; it may be a poison circulating in the fluids of the body, or it may be caused indirectly, as in the case where the irritation of cold produces inflammation. The process of inflammation is attended by—1st. Certain changes in the blood vessels and circulation; 2d. By the exudation of liquor sanguinis and migration of white corpuscles; and 3d. By alteration in the nutrition of the inflamed tissues.—(Green.)

This disturbance in the circulation and the changes in the blood vessels have always been prominent points to which attention has been drawn, and for a long time were looked upon as constituting the essential features of inflammation. To a great extent this is still true; for although other factors have been found to enter into a fuller understanding of the process, they by no means do away with the importance of already well-

* For the resumé of the views held at present on inflammation, I have used Billroth's Surgical Pathology; Rindfleisch's Pathological Histology, and Green's Pathology and Morbid Anatomy.

established facts. We are taught by the highest authorities of the present day, that the effects of an irritation which produces inflammation, is to cause a dilatation of the arteries, and after awhile a similar dilatation of the veins. The dilatation of the arteries begins at the moment the irritation is applied, and is not preceded by contraction. It increases slowly, and generally reaches its height in about twelve hours. The enlargement of the blood vessels is accompanied from the first with an increase in the rapidity of the current. This is soon followed with gradually increasing stagnation of the blood, the vessels remaining dilated. The decrease in the rapidity of the blood current is first seen in the veins; in the area of inflammation, however, we may see different vessels showing different degrees of this current change; in some it may be rapid; in some almost stagnant, and in others oscillating. As the circulation becomes slower and slower, the white corpuscles collect in the veins; they adhere to the sides of the vessel and nearly fill it. Just at this point comes into view the great modern factor of the inflammatory process; for now we see the white corpuscles take on those movements by which they make their way through the vessels and into the tissues. Green claims, both for Dr. W. Addison and Dr. A. Waller, the privilege of having seen and mentioned this condition. However this may be, the glory and honor of having seen its importance and giving to the fact a world-wide acceptance, is due to Cohnheim, of Berlin. As we all know, Cohnheim stretched the mesentery of a living frog over a piece of cork, and saw the white corpuscles first clinging to the sides of the vessels and then passing through. Along with the escape of the white corpuscles we have the effusion of liquor sanguinis. This effusion we are taught differs from that of simple congestion in the following particulars: It contains a much larger proportion of albumen and fibrin and an excess of phosphates and carbonates. With the alterations of the vessels, the part affected has its nutrition very much modified. This modification shows itself in different ways in the several tissues, but has for its chief character-

istic an increase in the activity of the cells commonly known as cell-proliferation. There are some who are disposed to think that in the migration of the white corpuscles we have found the true key to inflammation; but we must remember that, however brilliant this discovery may be, some eminent pathologists do not accept it as a final solution. Stricker's beautiful experiments with the cornea clearly show that we still have much to learn, and after learning much, to interpret. A deep and wonderfully rich mine has been opened, and will repay those who seek to dig for its hidden treasures. Who knows but that even now there is some one who sees with a clearer light, and is shaping happy thoughts into well-conceived theories, to be proved by well-established facts?

I can not stop to consider, in a general way, the termination of inflammation, but must pass on to its manifestation in individual tissues and organs. And first, in regard to the mucous membrane, Rindfleisch tells us that "the greater part of all diseased conditions of man are catarrhs of the mucous membrane, or are complicated with such."

The importance of the study of inflammation, as seen on mucous surfaces, will readily be granted, when we remember that, in ordinary every-day practice, such diseases as pneumonia, bronchitis, diarrhœa, and dysentery are the commonest we have to treat. Inflammation of the mucous membrane is divided into these two prominent types—catarrhal and croupous, or fibrinous. From the mouth to the anus, and over the entire respiratory tract, we may have either of these two conditions to meet. The catarrhal, or simpler form, shows itself by an increase of mucus, and is evident in cases of bronchitis and diarrhœa; the severer, or croupous form, is seen in dysentery and pneumonia, attaining its highest development in those cases attended by a diphtheritic deposit.

Now, take the case of an inflammation of the kidney, we have suppurative nephritis, in which the part affected is principally the pelvis. We have insterstitial nephritis, which is granular degeneration, and has for its marked features an

increase of fibrous tissue, and a wasting away of the tubular structure; we have again acute desquamative nephritis, which has its chief seat in the cortex. We have pneumonia divided into three varieties, croupous, catarrhal and interstitial. The first is the old typical pneumonia, running its three stages of engorgement, red, and grey hepatization.

The student of medicine ought to love this dear old disease, for it has been the battle-ground on which has been won the greatest fight of modern medicine. The catarrhal form derives great interest and importance from its connection with phthisis; interstitial pneumonia has for its characteristics chronicity. Dysentery has also its two forms, Heubner divides these as follows: (1) the sero-purulent; this he tells us is the catarrhal dysentery of Virchow, the follicular ulceration of Rokitansky and Bamberger; and (2) dysenteric inflammation with fibrinous exudation; this is the gangrenous and putrid dysentery of old writers. Inflammation of serous membranes occurs as these two varieties, adhesive and purulent, common examples of which we have in pleuritis, peritonitis, and pericarditis.

To understand clearly what we have to contend against when called upon to treat inflammation, we must follow its manifestations, in some particular organ, and its symptoms and course as exhibited in some particular disease. This I propose to do in my next article; let me now offer some general reflections on the treatment of disease.

I fear that in this age of dogmatism I may lay myself open to the grave charge of being orthodox, if in a paper I trust will be considered scientific I introduce a quotation I frankly confess is theological. I think, however, that I am justified, for the rules of logic, if they are to be of service, must be applicable to all sorts of reasoning. "When we examine, then, what it is which composes that process which is called inductive reasoning, we find that it consists of two parts, and that the first of these two parts is simply the discovery of a fact. There is wanted the physical cause of some known facts, and this cause is another fact not known as yet in this relation; for

which accordingly the philosopher institutes a search. It must be a fact which fulfills certain conditions; must always precede the known fact when the latter takes place, and always omit this precedence when it does not take place. The test of invariable antecedents puts aside as causes on the one hand all the facts which the event takes place without, and on the other hand all which the event does not take place with, till it gets at the residüum which is the physical cause.

The sagacity of the man of science, then, is shown in hitting upon and singling out the fact which fulfills these conditions from the midst of the whole promiscuous crowd of facts which surround the phenomenon before him—a process which severely tries his powers of observation, force and steadiness of attention, quickness of apprehension, watchfulness, accuracy; his powers of comparison, of seeing things in relation, and detecting hidden relationship and connection in things." How very appliable are these words to the treatment of disease.

We meet constantly with physicians who tell us that they have never known a certain remedy to fail in some certain disease; we carefully submit this statement to accurate analysis, and we find, either the disease has a spontaneous tendency to recovery, or that the medicine given has so little effect that it counts for nothing; or again that the system is strong enough even to withstand rough medication in obedience to a law formulated by Sir James Paget, as follows: "The human body was made for the storms of life as well as for its calm."

There is one great misfortune attached to the practice of medicine hard to accept and harder still to reconcile; it is this, that there is no profession where the ignorant and the learned stand so much on the same footing. This can never be overcome until the public shall learn what it has taken years even for the physician to acknowledge; "that the strength of modern therapeutics lies in the clearer perception than formerly of the great truth, that diseases are but perverted life processes, and have for their natural history not only a beginning, but equally a period of culmination and decline." The old simile

of the pilot guiding his ship through the storm becomes more and more of a reality as medicine advances; it may be very old; it may be very common-place; it may, like "banished from Rome" and "of man's first disobedience," have been so hawked about as to have lost its freshness; but as Shakspeare's fame has not diminished, although school boys murder his speeches, nor Milton's poetry grown less sweet because modern education demands that his noble lines should be parsed by school girls, so I apprehend the good, steady old pilot will remain at the helm and faithfully do his duty, if he be not hindered by those who seem to have forgotten the golden rule, "don't kick a fallen foe."

The great difficulty in the treatment of disease at the present day arises from these two facts, the ignorance of the patient and the unfortunate tendency of many physicians to look upon their Profession simply as a means of making money. It is most remarkable but true, that we continually meet with people who resist with spirit the physician's daring to express an opinion on any subject which these people have made a special study, but who, nevertheless, think that they know as much about medicine as the physicians. And, alas that we have to write it, we meet with many physicians who, finding it hard to study, and still harder to think, have, instead of in many cases throwing physic to the dogs, thrown away their books, their honesty and their duty, and go forth with the avowed determination that their profession must take its place not as the equal of other sciences, but as the fellow of other trades. Let me in this connection ask that the following story from that very suggestive book, "On the Restoration of Health" by Dr. Inman, be remembered: A rich tradesman, one of that class who think that they know everything, called a certain physician to attend him; after telling his symptoms, he requested the physician to bleed him; this was declined on the ground that it was not needed, and would only lead to paralysis. The physician was dismissed and another called; the latter applied a number of leeches; the blood was then taken

away, and in due time the paralysis followed. Dr. Inman tells the rest as follows: "It so happened that the two doctors referred to, were close and intimate friends, and the first very naturally remonstrated with the second upon his method of practice, but instead of hearing any apology, he received a lecture to this effect: "My dear fellow, if you want to get on as a medical practitioner, you must not fly in the face of the old fools who consult you. I knew as well as you did that bleeding was bad for the man, but if I had not taken him in hand, he would have gone to some one else who would, and I did not see any reason why I should not get as many fees out of him as I could; so I did all for the best, for myself in the first place, and for him in the second; he was content to be bled by leeches instead of by the lancet, and thus he was not injured half as much as he would have been had he gone elsewhere. You did not get one fee, whilst I have pocketed my ten guineas."

Dr. Inman adds: "The first man retained his honesty, and made but little money; the second continued to utilize his knowledge of the world, attained an enormous practice, and had a princely income."

I do not know how I can better conclude this article than by asking those who will read this story, to consider well the moral it conveys.

ART. II.—PUERPERAL CONVULSIONS—ANASARCA IN PRIMIPAROUS AND UNMARRIED WOMEN OCCURRING FROM THE FIFTH TO THE SIXTH MONTH OF GESTATION—AN EVIDENCE OF CRIMINAL INTENT TO INDUCE ABORTION—ONE CASE SUCCESSFULLY TREATED WITH CHLORAL HYDRATE. By L. B. JOHNSON, M. D., Walhalla, S. C.

I propose in this article to give only the history of three cases, two of primiparous and unmarried, and one unmarried and pregnant with second child, each of the three cases in the sixth month of gestation, and previously to the time of quickening were enjoying unexceptionally good health.

CASE I.—Sarah S.; aged twenty-two years; stout, hearty woman, six months advanced in second pregnancy. I saw this woman one afternoon in November, 1864, she was the mother of one child, two years of age; was living alone; said she "sent for me to treat her for dropsy. Health up to about four weeks since had been unusually good, in fact all her life; had taken cold from some imprudence, and had been drinking teas for some time; and some four weeks since, had commenced swelling, first in the feet and extending gradually upward until it had extended over the whole body;" she was enormously swollen and disfigured from the extensive infiltrations of the cellular tissues of the face and eyes. Upon inquiry as to her menstrual periods, she said she had cold only, and had been drinking teas, such as rattle-weed, star root, double tansy and such like; no harm in them, but said to be good for cold.

She refused to be examined per vaginam, and denied that anything "was wrong with her at all." I was satisfied, however, that something was wrong, and that the teas were for the purpose of inducing abortion, and that she was then suffering from the almost inevitable result of such malpractice—anasarca—and that her anasarca was not the result of anæmia or mechanical obstruction. I, however, prescribed for her a diuretic and laxative mixture; and at her earnest request visited her again the next morning. I called at 10 o'clock A. M., she had died a few minutes before my arrival; several women were present, and stated "that she refused to have company during the night, and on their coming in early that morning they found her in a fit, which was repeated at short intervals, until she died, without a returning consciousness."

On examination, we found a child apparently secreted in one part of the bed; the placenta was undelivered; but little bleeding had occurred; from the child having been cared for, we were led to infer that the fits came on after her delivery.

CASE II.—Carolina D.; unmarried; primiparous; aged eighteen years; six months advanced in pregnancy, was found in convulsions 5 o'clock A. M., December, 1869. I saw her at

11 o'clock A. M. This girl was of a good family. When I arrived she was having regular and unmistakable puerperal convulsions, recurring about every hour, the insensible or comatose condition lasting during each interval. She was dreadfully swollen—the whole body—eyes nearly closed.

On interrogating her mother, I could learn nothing, except that she had enjoyed the best of health up to the last few weeks, and the swelling had been coming on for some four weeks. She got supper the night previous, and went to bed as usual. In the night heard her making a strange noise, but paid no attention to her till next morning at 5 o'clock, when she "found her with a fit on her." Her mother insisted that she knew her menses to be regular, as she had been doing the washing, and had a right to know.

Now I considered myself in a dilemma; I was perfectly satisfied that her fits were puerperal; and how puerperal in a young girl of good character and regular in her monthly sickness? This was on a Sunday, in the country, and the house was literally packed with friends " to see the girl in fits."

Now, how could I satisfy myself as to her real condition, and not create suspicion—a sensation? I did, however. She was pregnant, I also ascertained that labor was inevitable. I gave strong infusions of ergot; convulsions ceased, and in the course of an hour regular pains came on, and she was delivered at 10 P. M. Consciousness returned next day at noon; she had a rapid and complete recovery.

Next morning her mother could tell of the great quantity of teas—rattle-weed, star root, and many others she had been drinking for several weeks, also some medicine a certain young man had procured for her at a drug store. I was satisfied from her mother's statement that she went into convulsions about 10 o'clock; if so, she was in convulsions twenty-four hours, coma continuing ten hours, making thirty-four hours.

CASE III.—Amanda C.; unmarried; primiparous; aged twenty-two years; stout, hearty girl; six months advanced in pregnancy; was taken in convulsions at 5 o'clock, A. M., June,

1874. I saw her at 4 P. M., fits returning regularly every half hour, comatose condition lasting the entire interval.

On inquiry, found the girl had been swelling about four weeks; for several days had this extended over the entire body; eyes nearly closed; features so changed from her bloated condition that her friends could scarcely recognize her; "had got cold about Christmas, and had drank some teas, such as rattleweed, star root, double tansy, and cotton-snake root."

I was unable to get any information from her mother as to the cause of her fits. While the comatose condition was complete, I examined her per vaginam and satisfied myself that she was six months advanced in pregnancy, and that the child was dead. The diagnosis being satisfactory, my line of treatment was soon established. I gave her twenty grains of chloral hydrate to control the convulsions, and one drachm fluid extract of ergot (prepared by Gaelon) to stimulate the womb to action. These two remedies combined and repeated every hour from 8 P. M. to 2 A. M., taking seven doses, or one hundred and forty grains of chloral and seven drachms of fluid extract of ergot.

Immediately after taking the dose at 2 oclock, the convulsions ceased, labor advanced, and the child was born at 5 o'clock A. M. Consciousness returned at 3 P. M. Her recovery was complete and rapid. Thus she was in convulsions twenty-one hours, comatose condition continuing thirteen hours, making a total of thirty-four hours from first convulsion till complete consciousness returned.

Remarks.—In an extensive practice of twenty-three years, I have seen only nine cases of puerperal convulsions; two were primiparous and unmarried; one unmarried and pregnant with second child—each anasarcous, and aborted at the sixth month. Each of these women possessed most excellent health up to a few weeks of their confinement, and also after getting up from their lying-in. The remaining six cases were married; confined at term. Only two of the six had œdema of the lower extremities. Of the first three cases, one died without treat-

ment; of the last six cases, two died, one the patient of another physician.

I desire principally to direct the attention of the reader to the remarkable circumstance, that each of the three young women—Cases I., II., and III.—suffered to an alarming extent from anasarca; each one of them was swollen to such an extent and their features were so changed that their immediate friends could scarcely recognize them, and this, too, in young women previously healthy and robust; women that hardly knew what it was to have a day's sickness.

While of the six other cases seen by me (and three of them anæmic), none suffered from anasarca, and only one from œdematous extremities; also that the three young women miscarried at the sixth month, while the remaining six went to full term.

Why did these three cases become dropsical at the early period of six months? Or, why do women, during gestation, become dropsical at all? Doubtless many cases, especially in primiparous women, suffer from œdema of the lower extremities, and sometimes anasarca, during the *last weeks of gestation* from mechanical obstructions; but when occurring in after-pregnancies, they will oftener be found to arise from general bad health, a weakened and impoverished condition of the blood and anæmia. But to presume upon mechanical obstruction at the sixth month of gestation can not be entertained for a moment; neither can that general debilitated condition accompanying dropsy supervene at six months of gestation in hitherto healthy women, except through the interposition of some noxious agent.

It is generally conceded that albumen is to be found in the urine of most eclampsic women. In a country practice it is very difficult to make chemical examinations of the urine; in many instances never having seen the patient before she is seen in convulsions, and frequently never repeating the visit. So it was in nearly all my cases, consequently no examinations were made. Supposing, however, that each of these three cases suf-

fered from albuminuria, what could have caused such a condition so suddenly in hitherto healthy young women, and without any known cause?

Upon a review of the above three cases, you will perceive that each of them had been drenched to the utmost extent with teas—diluents—not as a tisane would be prescribed, but by the gallon; and that many of these teas have a known reputation among the common people as remedies of great power in *cold;* that is, to relieve obstructed menstruation; and that soon after commencing the use of these teas, œdema of the extremities was observed, and as the teas were persevered in the swelling continued to increase until it had extended over the entire body.

From this powerful and constant excitation of the kidneys, a renal congestion was established, and the flow of albumen was increased, if not originated.

Cazeaux says: "The organic conditions which produce albuminuria are certainly the most, I would even say the only ones, favorable to the production of eclampsia. This proposition, which is at present incontrovertible, explains the influences of certain circumstances which most authors have mentioned as predisposing causes; this, among the latter, has been classed as one of the most active; œdema of the lower extremities, when considerable; but, above all, general infiltration, invading successively the body, upper extremities, and face. It is now a well-ascertained fact, that this general œdema is almost always connected with an alteration of the urinary secretion, and that only when accompanied with albuminuria does it appear to give rise to eclampsia."

I can not hold, however, that albuminuria or anasarca, or both combined, can give rise to eclampsia; but that the causes producing the above condition—irritation and congestion of the renal organs, and the consequent effect of albuminuria in eliminating the albumen from the blood, together with the natural excitement of the sensitive nerves of the uterus—give rise to

a peculiar excitement of the cerebro-spinal centre, which becomes itself the direct cause of the convulsions.

A very remarkable fact, too, each of these cases were unmarried, and had peculiar motives for inducing abortion, and that out of nine cases, all were married but three, and none suffered from anasarca but these three young women.

Though we would have been unable to prove anything before a coroner's jury, yet, from all the facts and circumstances connected with the cases, I was perfectly satisfied that abortion was induced with criminal intent.

Some may ask, why not have brought it on at an earlier date? For the first few months after arrest of the menses, they are not confident that it is a case of pregnancy, and so it passes until the time of quickening. They then become alarmed and seek an interview with their seducer; this will consume at least one week. Then the ways and means are agreed upon, and a week is consumed in procuring the means; so the dosing is commenced about the fifth month. And four weeks of teaing and drenching with noxious drugs will generally suffice to put the system in a favorable condition for the production of anasarca.

ECLECTIC DEPARTMENT.

"Carpere et colligere."

ART. I.—WHERE SHALL WE SEND OUR CONSUMPTIVES. By Q. C. SMITH, M. D., Cloverdale, California.

NOTE.—As another Winter has nearly passed away, its climatic record in regard to phthisis will be valued by all.—E. S. G.

Being desirous of always being ready to give a reason for the hope that is in us, we have spent much time and labor in investigating this subject. As to the relative merits of localities and climates outside the United States, we shall have little

to say: all that we could say, that is well authenticated, concerning foreign climates, in connection with this subject, having already been said, much of it many times over.

After reading through loads of standard and current medical literature that treat of this subject, we are forcibly impressed with the gross ambiguity that attaches to much of it. We sometimes see climates described as being all that could be desired for the healing of pulmonary diseases, which climates exist only in the fertile imagination of the over-sanguine writer.

It is universally admitted that prophylactics are far preferable to even certain specifics. And it is in accordance with enlightened medicine to treat the patient rather than the disease. And in the treatment of diseases involving danger to life, the mode of dying is to be considered; for a proper solution of this question will often furnish valuable indications for treatment, by means of which the danger may be forestalled by the physician using such remedies and measures as will most effectually obviate the tendency to death.

Some distinguished authorities seem to doubt whether true pulmonary consumption is ever really cured. We are not prepared to give this proposition a positive answer, owing mainly to the fact that physiologists and pathologists have failed to define and agree upon a plain line of demarcation as to where physiology ceases and pathology commences, as concerning this disease.

If we be allowed to constitute a negation a cause, we would say that the essential cause of consumption is a want of innate power in the animal organism to properly prepare, assimilate, and appropriate the raparative materials that are placed at its disposal. The predisposing causes are, an inherited or acquired diathesis, most frequently the former.

In our personal investigations and observations, which have extended from the Atlantic to the Pacific, in many of the States and Territories, we found that those who remained most constantly in the open air, and took free active exercise, were least

liable to consumption. We also observed that those who lived in elevated regions, where the atmosphere is dry and equable, and who spent most of their time in some active out-door exercise, very rarely contracted consumption. We think one of the main reasons why a residence in an elevated region is beneficial in preventing or curing consumption is because the atmosphere, being more attenuated, its pressure is less, and consequently the circulation is more active, especially in the lungs and cutaneous capillaries, where the metamorphosing forces give their finishing touch in perfecting the building-up material for the use of the various tissues of the body.

In confirmation of what we have just said, we have observed individuals, who had been previously living in the lower Mississippi Valley, suffering with digestive and pulmonary troubles, being reduced to living skeletons, go to and travel in the regions immediately bordering along the eastern base of the Rocky Mountains in Southern Colorado and New Mexico, in the winter season, and they would almost invariably improve rapidly, many of them easily digesting three "square meals" a day, and rapidly gaining flesh and strength; and that entirely without aid or hindrance of drugs.

The most pleasant and best adapted part of the United States, as a winter health-resort for consumptives, is in the belt of country bordering along the eastern base of the Rocky Mountains, not farther north than the Arkansas Valley in Colorado, nor farther south than Santa Fe in New Mexico. Farther north than the Arkansas River Valley is too cold, and this is the main objection to Minnesota, a locality of considerable celebrity for the relief of consumptives.

The climate of Florida is too warm and damp.

It is all-important that the consumptive should spend the most of every day in the open air, taking active exercise. This can be very pleasantly done in the localities we have recommended, from August until April, as no rain falls during that interval, and very little snow, which rarely lasts one whole day in the valleys.

Consumptives should not sleep in tight houses; and, indeed, most of the time we have prescribed for them to remain in Southern Colorado and New Mexico, it is best that they sleep in brush-arbors, thatched with grass.

Horseback exercise is to be preferred; but should the patient be a lady, or a gentleman unaccustomed to riding on horseback, then an open carriage may be used.

Southern Colorado and New Mexico abound with the most pleasant, extensive, and exhilarating drives it has ever been our good fortune to enjoy. Beautiful level parks and gently-rolling mesas, daily clothed in bright sunshine, stretch far away to meet the beautiful evergreens that cover the base of the snow-capped mountains, making the scenery cheerful and entertaining.

Consumptives should clothe comfortably, but they need not be fearful of taking cold in this dry atmosphere, as it is a poor conductor of heat, and consequently very pleasant at a temperature that would cause discomfort if it were moist.

Consumptives should thoroughly wash their whole persons once a week, having the water at a pleasant temperature. They should take their meals at regular hours, the food being as generous in quality and variety as the digestive organs will assimilate. Fresh milk and fresh meats are generally well borne, and may largely compose the consumptive's rations.

The atmosphere in Colorado and New Mexico during the months we have mentioned is so pure and dry that a piece of fresh beef may be hung out in the open air without a particle of salt, and it will dry hard, and keep sound and sweet.

The evening meal should be taken one hour before retiring for the night.

Consumptives should retire early, and, if possible, sleep all night, having plenty of blankets to keep them comfortable.

But little exercise should be taken before breakfast. No stimulants, in any form, or medicines that are calculated to increase the appetite, should be taken on an empty stomach.

Regardless of the wealth of consumptives, it will be much to

their advantage to have some definite daily employment that will help to stimulate them to take regular out-door exercise, and cause them to forget their ailments as much as possible, and keep their minds pleasantly employed. We have frequented many health-resorts, and have observed that many persons die for the want of some more entertaining employment. Such individuals study about little else but dying, taking so little interest in life and the things that pertain to life, that they unconsciously, as it were, and without a remonstrating struggle, drift down into the tomb, the balance of mankind often scarcely missing their listless presence.

Such persons, not careing to live, and consequently must die, need not make long voyages or tedious journeys seeking health, for they seek health as lazy vagabonds do labor, believing—yea, even hoping—they will not find it.

We made extensive inquiry among the old stock ranchers of Colorado and New Mexico, as to their liability to consumption, and they informed us that it was extremely rare for this disease to be contracted by those who were habitually employed in the open air in active exercise. Many of them stated that they had never known such an occurrence.

On the other hand, we have observed that when young Indians are taken to live with the whites, they almost always fall victims to some form of tuberculous disease before they arrive at adult age. The Indian race is, both physically and intellectually, inferior to the white race, and can not bear the pernicious practices of so-called civilization.

Consumptives should stay in towns, and board at hotels, and sleep in houses, as little as possible.

We call attention to this matter more particularly because we have seen great harm result from the pursuance of an opposite course. We have seen many consumptives in Colorado and New Mexico, who had gone thither seeking health, stopping in towns, sitting around the warmest corners of saloons, smoking, and often drinking, watching the gaming that was going on, or the Mexicans taming wild horses in the streets, and frequenting

the fandangos at night, carousing away the time until the wee small hours of the morning. As a matter of course, such conduct brought little improvement of health, physically and morally.

Consumptives should not congregate many together, where they will daily see each other.

Some authorities highly recommend California as a resort for consumptives. But when we consider that no other country comprises, within so small a space, such various, so many, and such strongly-marked natural divisions, isolated volcanic peaks, vast domes of granite, steep and rugged mountain ridges, fertile and beautiful valleys, bare deserts, spacious bays, magnificent rivers, unparalleled water-falls, picturesque lakes, extensive marshes, broad prairies, dense and lofty forests—for all these—yea, more—belong to California,—ambiguity is plainly to be perceived, if California is referred to as a whole. The principal differences of California climate, speaking in a general way, from that of the States and Territories east of the Rocky Mountains, are, that the winters are warmer, and the summers—especially at night—cooler; the quantity of rain is less, and confined principally to the winter and early spring months; the atmosphere is dryer, the cloudy days fewer, and violent wind-storms, thunder, and lightning, rarer; and the winds are more regular—blowing from the North for fair weather, and from the South for rain.

Seeing that California is so strongly contrasting in its topography, and consequently varied in climate, and so vast in domain, reaching through nearly nine and a half degrees of latitude—San Diego being as far south as Charleston, South Carolina and Crescent City as far north as Chicago, Ill.—we say, when we consider these things, there is no cause for wonder that these climates of California are so varied and diverse.

When consumptives are merely directed to go to California, how are they to know what climate or climates are likely to be beneficial to them? Should they take rooms in a hotel in San Francisco, where the cold mist in summer, and the chilling fog

in winter, often fill the streets in the morning until 9 o'clock, cold enough to make a well Eastern man shiver with his overcoat on?—or must they hie away to the rarified regions of the snow-capped Sierras, where it takes a bushel of air to make a pint?—or, are they to repair to the orange groves of Los Angelos or Anaheim, where balmy breezes as softly blow as erst they wafted o'er Ceylon's Isle, and there day-dream away the long, pleasant, bright sunshiny days, luxuriating amid the richness of their generous fruits and beautiful flowers?—or are they to sojourn in the dense red-wood forests of the North Coast Range, where, in many places, broad daylight never reaches the face of the earth?

If consumptives desire to travel or sojourn for their health, during the summer and early autumn months, California, all things considered, offers decided advantages above any other part of the United States; for little or no rain falls, ordinarily, in many parts of it, from May to November; consequently consumptives can, and should, live comfortably out-of-doors, day and night, during that interval.

For the information of those consumptives who will persist in stopping in towns, among a congregation of invalids, and boarding at hotels, we would mention some of the many health-resorts of California: San Rafael, St. Helena, Los Angelos, San Diego, Santa Barbara, and a number of mineral springs, many of which are located along amidst the North Coast Range.

Probably the best suited to the greatest number of cases of any of the places we have named, is Santa Barbara, though we will not take time and space to tell of the supposed peculiar excellencies of each localitiy. But, as we said of Southern Colorado, and New Mexico, so we repeat of California—that consumptives should remain in towns, board at hotels, and sleep in houses, as little as possible. If they wish better protection than a brush arbor will give, they may provide themselves with a canvas tent, but the brush arbor is far preferable, and they should not remain long camped in one spot.

In a majority of cases, along the coast range of mountains,

all things considered, will be found the best camping ground for consumptives. They can procure food and other supplies from the ranchers and neighboring towns and villages. The scenery along this range of mountains, in many places, is unsurpassed in beauty, the water plenty, and of the best quality, and the temperature of the atmosphere generally more equable than farther in the interior; and yet not moist and chilly, as it is very near the coast.

Some consumptives, in the advanced stages of the disease, will find the atmosphere of Southern Colorado and New Mexico, as well as that of the higher mountain localities of California, too rarified for their comfort; and if this inconvenience should persist with them, after a few weeks' sojourn, they will find a mild atmosphere near the sea level more comfortable.

Santa Barbara or San Diego will suit such cases as well as any place we know of, if they must stop in a town; but even these cases, though almost always incurable, will find it more comfortable camping out in the open air, than moping around hotels and boarding-houses, meeting their pictures daily.

Finally, we would say, we believe no climate or climates are a specific for the cure of consumption; yet we do believe that the remediable measures for it consist far more in climate than in medicine. But of the therapeutics of consumption, we refer the reader to the systematic works on medicine.—*Nashville Jour. of Med. and Surg.*

ART. II.—ARIZONA TERRITORY AS A HEALTH RESORT FOR CONSUMPTIVES. By B. G. McPHAIL, Post Surgeon U. S. A., Camp Alpache, Arizona Territory.

Thinking it will be of interest and value to your professional readers, and through them to the many sufferers under their care, I desire to call their attention to the beneficial influence of the climate of this Territory on diseases of the respiratory

organs. I say this Territory, but more properly should include New Mexico and Southern California, embracing that vast area extending from the Rio Grande to the Pacific, and from the 35th parallel to the Mexican border—since the climate and general topographical characteristics are similar. The country consists of alternate valleys, table lands, and mountains; and any altitude desirable may be obtained, from the sea level to an elevation of over ten thousand feet, with a corresponding variety of temperature. I do not propose an essay on climatic influence, nor to advance any new theory, but briefly and in a desultory manner to state a few facts that may be of value in directing the attention of sufferers to what I consider the finest climate in the United States for pulmonary diseases.

Last November I arrived at Yuma—formerly called Arizona City—thence proceeded to Tucson, where I spent a week; from thence proceeded to Camp Grant, a four-company U. S. military post, where I spent the winter. I was out in the mountains with a large scouting party during the most of the spring, and since May have been on duty here—a three-company post—as post surgeon. In addition to the troops, I have been thrown with many native Mexicans and more than twenty-five hundred native Apache Indians, on the San Carlos and White Mountain Reservations; and during all this period I have not seen a case of consumption amongst the natives, and no case in the white population that had not been arrested, many of which were apparently cured. I have not seen a case of pneumonia or other serious disease of the respiratory organs. I have met soldiers and officers who were suffering from almost every form of lung diseases on their arrival in the Territory: phthisis in its different forms—in several, far advanced—bronchitis, asthma, impaired functions from old pneumonias, pleurisies, etc., and in every case marked improvement has followed after a short residence here. Many cases seem to be cured—others benefited and held in abeyance.

Yuma is located on the Colorado river a hundred and fifty miles above its mouth, and but a few feet above tide-water. It

is by no means in an attractive section of country, but the climate during the winter months is delightful. In December and January last, the monthly mean was 55°—highest at 2 P. M., 72°—lowest at 7 A. M., 38°—with ten rainy days during these months. Annual rain fall, five inches. Being near an extensive desert, the air is very dry, and evaporation is rapid. The summers are hot, and I should think enervating; but it is stated on good authority* that a temperature of 100° F. may exist at Fort Yuma for weeks in succession, and there will be no additional sickness in consequence.

The following letter, received a short time since, explains itself, and coming from an experienced and trustworthy physician, is worthy of the highest consideration:

"FORT YUMA, July 3, 1874.

"Dear Sir,—The statement which you saw in the Tucson paper, that I would before long publish an article on the climate of Arizona is not strictly correct. I have been engaged during the winter in collecting a few facts on the climate, and particularly in reference to the treatment of tubercular phthisis, for the benefit of Dr. Dennison, of Denver, Colorado, who has been for the past two years engaged in collecting data on the subject of climate, with a view of publishing a work during the coming Fall or Winter.

* * * * * * *

"My own experience is of course very limited with regard to this particular disease, as in an extensive practice in this vicinity of two years, I have met with but three cases of the disease. Two of these I found amongst the enlisted men, and one amongst the native Mexican population. The two former are now on duty nearly well, and the latter succumbed—owing, I am satisfied, to want of proper hygienic care and attention, and also to the disease being complicated with hereditary syphilis. I have not seen a single case among the native Indians in this vicinity, and, with the exception of the one above alluded to,

*Asst-Surg. J. V. Lauderdale, U. S. A.

not a case amongst the Mexican population. My own conviction is, that the belt of country lying between 32° and 35°, and extending from the Pacific coast to the Valley of the Rio Grande, is the best adapted of any other portion of the continent for the treatment of tubercular phthisis, and that the completion of the projected Texas Pacific railroad will make it the resort for this class of invalids.

"My own views with regard to the treatment of the disease are well expressed in the "Medical Record" of June 1st, 1874, page 296, and are briefly as follows:

"1st. An air of such a nature that it can be breathed for the greater part of the 24 hours; 2d. Sun light; 3d. An atmosphere destitute of dust; 4th. Exercise without fatigue, and in addition a low altitude.

"All these may be obtained almost anywhere in the belt of country I have embraced.

* * * * * * *

Very truly, etc., GEO. S. ROSE,
Asst. Surg. U. S. A."

Tucson, the capital of the Territory, is a town of about 3,500 inhabitants, and is located on a pleasant plain, 2,000 feet above the sea, with lofty mountains in close proximity. It is several degrees colder in the winter and not so warm in summer as Yuma, and for eight months of the year affords an excellent climate. Snow seldom falls on the plain, though the mountain tops are occasionally covered. The summer months are rendered bearable by the aid of adobe houses with thick walls. Annual mean temperature 62° to 65° F.

Camp Grant is about one hundred miles northeast of Tucson, and located, at an altitude of 4,000 feet, along the southeast bank of the Graham Mountains, which tower far above; while a beautiful plain extends for many miles in the distance, bounded by a parallel range, and forming a valley over a hundred miles long by fifteen in width. As most of the storms come from the East, it is in a measure sheltered from their severity.

The thermometer occasionally falls as low as 22°, and during the winter and early spring the mountain peaks are covered with snow, but rarely an inch falls upon the valley. The temperature rarely exceeds 100° F. in the summer, and the nights are cool. I did not fail to take out-of-door exercise more than a dozen days during the whole of last winter.

Camp Apache is located in the Sierra Blanco Mountains, lat. 34°, long. 109° 45′, altitude 5,600 feet—constructed on a Mesa, in a beautiful valley, almost entirely surrounded by mountains. The White river, a silvery stream of pure water, courses through this valley, which is clothed with a luxuriant verdant growth, while the mountain sides are covered with the live oak, cedar, pine, and fir trees. The winters here are sometimes harsh, the thermometer registering occasionally as low as 6°, with considerable rain and snow; yet when the days are clear, the temperature is mild and bracing. But from May to December the climate is superb, the temperature rarely reaching 100° at noon, and generally falling to about 70° at night, causing a blanket to be comfortable, and refreshing sleep certain. This summer the snow did not disappear from the mountain tops until the middle of June, and the so-called rainy season commenced about the first of July and lasted until September 1st. During this period frequent showers, with vivid lightning, occur at night, leaving the day bright, with a delightful atmosphere.

You will thus see that almost any temperature desired may be obtained within a comparatively short distance, according to latitude and altitude. The valleys, foothills, canons, and mountains—the pleasing variety of vegetation, from the rich grass that carpets the valleys to the forests of huge pine and fir which cover the lofty mountain tops, and the abundance of game in many sections—render the country attractive and grateful to the eye, and with the undeveloped mineral wealth, offer promise of future wealth and greatness.

The climate of Central Arizona and California, on the whole, resembles that of the Italian climate, whose chief injurious

effect is to indispose the people to labor of hand or brain. The *dolce fur niente* of the Southern Italian is unknown in California. The peculiarities of this climate which distinguish it from that of the States east of the Rocky Mountains, are, that the summers are cooler and the winters warmer, and that there is neither a frequent nor a sharp change from heat to cold, or the reverse. The air, too, is much drier; there are fewer cloudy days, and fewer storms than in the Eastern States. To this must be added a circumstance most important and delightful to the inhabitants, that the nights are always cool and refreshing, even where, as in the low-lying valleys of the southern part, the days are often hot. The dryness of the atmosphere, which favors a quick dispersion of the perspiration, makes even a high temperature far easier to bear than the same temperature in a damper climate.

The climatic features most closely connected with air—temperature, humidity, movement, weight, composition, electrical condition, and light (the necessity of which for growth and perfect nutrition makes us feel sure they are important parts of climate)—are found in the most desirable conditions within the limits of this section. The numerous little valleys and secluded canons afford protection from the sudden storms of winter, while the more elevated positions afford a retreat from the summer heat and malarial poison.

I have been astonished to find how well in this dry atmosphere phthisical persons will bear great changes of temperature, if not exposed to moving currents of air; and there can be little doubt that the wonderful balance of the system is soon reädjusted. I knew an officer during the past winter, whose lungs were much diseased and functions greatly impaired, much benefited by moving into the mountains at a great elevation, where he lived in a tent and superintended a party of wood-choppers. The air in these pine and fir forests seems to be soothing to the delicate mucous membrane. My experience does not agree with the opinion that "in chronic lung diseases, a moist air is generally most agreeable and allays cough—and

that the evaporation from the lungs produced by a dry atmosphere appears to irritate them."*

"In ascending mountains there is a rarefaction, i. e., lessened pressure of air; on an average an ascent of about 900 feet takes off a half pound: there are also lowered temperature and lessened moisture about 4,000 feet; greater movement of the air; increased amount of light; greater sun radiation, if clouds are absent. The air is freer from germs of infusoria."* "At altitudes under 6,000 or 7,000 feet the effects of mountain air are a very marked improvement in digestion, sanguification, and in nervous and muscular vigor. Tissue change is accelerated. As a curative agent, mountain air ranks very high in all anæmic affections, from whatever cause—malaria, hæmorrhage, digestive feebleness, and even in lead and mercury poisoning.

"Tubercular phthisis occurs not rarely in the lower mountains or sub-Alpine region, but in the true Alpine region it seems to be almost absent. Thus it is of very rare occurrence among the priests on the Great St. Bernard. Patients affected with phthisis in Lima are sent on the ajacent mountains of Peru, where the disease is scarcely known at an elevation of 8,000 feet. It is described as very rare at Mexico (7,000 feet) and Quito (8,700), and still more so at higher elevations."†

"At Vera Cruz the disease is common; at Puebla and on the Mexican heights, it is almost absent."‡

My experience fully accords with the above.

A cubic foot of dry air at the sea level and at 32° F. contains 130.4 grains of oxygen. An ascent about 5,000 feet, which reduces the barometer to 25 inches, will lessen this one-sixth =108.6 grains. Now it is supposed by many that the increased number of respirations compensate for this deficiency; but from observations made on the troops and Indians at this elevation, I have been unable to discover sufficient increase of respirations to make up this deficiency in oxygen. There seems

*Parkes' Practical Hygiene. †Hermon Weber, Climate of Swiss Alps.
‡M. Jourdanet.

to be an unconscious tendency to take a deeper inspiration than usual every fourth or fifth time, which may compensate to some extent. Experiments on animals tend to show that when the proportion of oxygen does not sink below a certain point (14 per cent.), as much is absorbed into the blood as when the oxygen is in normal proportion.

The distance traveled by the Indians and horses in this section is almost incredible. A well authenticated case occurred where a body of allied Indian soldiers marched sixty-four miles in twenty-four hours over a rugged mountain trail. One of the guides, who has lived with these Indians for years, assures me an Indian traveled afoot sixty miles between sunrise and dark, and offered to wager a hundred dollars that there are many on this reservation who can travel a hundred measured miles within twenty-four hours. Couriers have sometimes ridden the same horse a hundred miles from sun to sun, and a case is reported of a hundred and twenty miles being ridden in the same time, without injury to the animal.

I do not mean to say that the climate of mountainous regions is essentail to the cure of phthisis, but I do think it possesses many advantages, and is more likely to prove beneficial in the earlier stages of the disease. In cases where there is disintegration of lung tissue, an elevation of 3,000 feet may be safely tried, and by gradual approach double that elevation may be attained without injury and probably with benefit, provided no serious disease of the heart exists.

As Arizona and New Mexico are inaccessible, and the accommodations for travellers at present so indifferent, it is not likely to become a popular resort until the railroad connects it with the outside world. Then, in my opinion, it will become the Mecca of the continent for consumptives. But Southern California, which is but little, if any, inferior, is very attractive and easily reached. The following extracts from a letter in Nordhoff's California, written by a consumptive, who has visited nearly all the popular resorts for that class of patients in this country and Europe, explains itself, and is, I think, not overdrawn:

"ANAHEIM, LOS ANGELES CO., CAL.

"Southern California presents a most gloriously invigorating, tonic, and stimulating climate, very much superior to anything I know of—the air is so pure and so much drier than at Mentone (on the Lake of Geneva) or elsewhere; and although it has these properties, it has a most soothing influence on the mucous membrane, even more so than the climate of Florida, and without the enervating effect. It is quite as stimulating as Minnesota, without the intense cold of that climate. * * * During the past winter, out of one hundred and fourteen days, I spent one hundred and six in the open air. This was in part of November, December, and February. Italy is generally a poor climate for the invalid, and the "pure blue Italian skies" are not to be compared to ours. One can come to California and spend the winter as cheaply as in Vevey, Clarens, or Montreux, and these places are the cheapest winter resorts in Europe. For instance, in Santa Barbara or Horton's in San Diego, one can board for forty-eight dollars per month." —*Va. Med. Monthly.*

ART. III.—HEALTH RESORTS AT THE SOUTH. By WILLIAM W. MORLAND, M. D. [Read before the Massachusetts Medical Society, at its Annual Meeting.]

The constantly increasing travel of invalids to southern latitudes, every year more and more arrests our attention, and it need hardly be said, in this presence, that this crusade after health is too frequently begun at the wrong time, imperfectly carried out when rightly begun, and, in very many instances, brought to a premature termination. Whether an invalid—and especially a pulmonary invalid—should go from home at all, should be left implicitly to his physician to determine, who, in addition to careful reflections upon the nature and stage of the malady, will do wisely to inform himself as to the "surroundings" awaiting his patient in the proposed place of his temporary sojourn, and also to assure himself of his ability to

command comforts and attention when among strangers. It is worse than useless for those who have not means sufficient to be well cared for, to leave their homes—the invalid can not "rough it."

Not every place where people get well from time to time, deserves the name of health-resort. No more—indeed, very often—than the earth-bath about which we were told, not long since, wherein somewhere "out West," six victims of scurvy were buried, "up to their necks," and left over night. The account goes on to state that the trial as to the curative properties of the earth, in this instance, was unsatisfactory, as a pack of "coyotes" came along, in the night, and "ate the six heads off!" Unfortunately, there are marauders more stealthy and seductive than these wild prairie wolves. The well-known fact of the wide prevalence of ailments coming under the designation "nervous" or "general" debility, noticeable so frequently in young ladies, and distinctly traceable to the immense and exhausting labor of following the gay goddess Fashion, during "the season," at our various watering places and elsewhere—especially just after a hard winter-campaign in the city—furnishes only too ample proof of the assertion. So, too, the fascination of money-making, and the excitements of business life which are constantly luring or driving men, in our day, into that overwork and utter neglect of recreation which finally breaks down the strongest, should elicit from our Profession the most earnest warnings before it is too late—before what a patient lately described as "fatigue in the head," becomes softening of the brain, insanity, or hopeless imbecility.

But what we have mainly in view has more reference to the resorts for pulmonary and throat complaints, than to the gout-and-rheumatism-curing waters of Sharon, the famed Springs of Saratoga, or the "Geysers" of California—the latest wonder of that wonderful land—whose "stream," arising from the sieve-like crust of the earth, envelopes the astonished traveler as with a mantle of mist, and whose healing qualities are believed to be marvellous.

Florida attracts crowds of invalids and tourists to its delicious climate and tropical scenery. Hitherto, the chief drawback to the enjoyment of these has been the insufficient and very inferior accommodations, and the wretched food—poor in quality and infamously cooked. A great improvement, indeed, has taken place within the past two or three years, and will doubtless be progressive. Returned travelers, however, this spring, complain not a little of discomforts in the way of crowded conveyances and hotels; and it would appear that suitable food and a knowledge of its proper preparation—especially for valetudinarians—are to be found in only two or three localities. Yet the influx of travelers, and especially the prolonged residence of those escaping from northern winters and even more dangerous springs, must lead to the increase of good accommodations and of the means and appliances which, while only luxuries to the healthy traveler, are necessities to delicate, susceptible invalids, who can not live upon climate alone. However balmy the air that steals across St. John's river, or, more bracing and fresh, tosses the feathery palm leaves at St. Augustine, the stomach must be catered for, as well as the lungs, and leathery beefsteaks, swimming in the grease in which they have been fried—to fry steaks and chops ought to be made a capital offence by statute—and yet, as is well known, the felonious act is committed in New England as well as farther south—heavy, sour, saleratus-sprinkled bread, rancid butter, *et id omne genus*, are not wholesome adjuncts to the superlative qualities of the climate. A patient who has frequently been in Florida, said, recently, that while the air was absolutely medicine to the throat and lungs, and nowhere else could the breath be drawn with such a sensation of comfort and freedom as along the St. John's—and especially at or near Jacksonville—digestion was often seriously disturbed by certain of the causes mentioned. Your strong and healthy tourist, who trudges about Florida, shooting alligators, fishing, rowing, etc., and able to brave heat, fatigue, dirt, doughnuts, pork, and other queer and trying things, can not appreciate the invalid's annoyances and dangers.

The St. James Hotel, at Jacksonville, is the best in the place, and its table was well provided last year. In the height of the season, invalids will lack suitable attendance unless they take a servant with them. From Magnolia we have the most favorable reports, describing it as furnishing "a genuine Northern home in that sunny, Southern land." This season, our city and its vicinity have been largely represented at Magnolia, and so much satisfaction have the locality and the provision for the accommodation of guests given, that many propose building cottages there for winter homes. The Magnolia establishment commands the accomplished services of Dr. Rogers, formerly at Jacksonville; he is a New England gentleman, long and favorably known in this community.

Hotel accommodation is now pronounced excellent at Palatka. At St. Augustine, the finely-situated hotel at the pier-head was not satisfactory as to *cuisine* during a short stay we made there in 1870; and we notice similar judgment is passed upon it, and the other hotel this year. As they have been liberally patronized, even greatly "crowded," the past season, more successful exertion in the catering department might, not unreasonably, have been looked for. There are two or three very good boarding-houses in the town, where, to our personal knowledge, both good material and excellent cooking are to be had.

The fare on the river boats is not generally good. On many of them it is atrocious, and there is great necessity for improvement, before it can be pronounced even safe for invalids to be much upon them. Neither can we compliment very highly the tables of the fine sea-going steamers from New York to the Southern ports. It is true that large numbers of passengers, on account of sea-sickness, in addition to their other troubles, are somewhat indifferent to food and cookery—but many others are not, and a reform in these respects is certainly needed.

A few words may here appropriately be said in reference to modes of transit from the North to the South. So far as sick and feeble persons are concerned, there can be no doubt that the steamship voyage from New York to Savannah or Charles-

ton, is by far the preferable mode. From Savannah, a day's or a night's ride, by rail, brings one to Jacksonville, whence conveyance, by boat, to various points is easy. The entire journey by rail is painful, dangerous, and exhausting to invalids. To say nothing of its length, the often unavoidable exposure, by change of cars at unconscionable hours—the poor accommodations, if stops are made, etc., more than counterbalance the annoyances and discomforts of a three days' sea voyage—admitting those to be enough for average mortals.

What class of invalids should go to Florida? Comsumptives, undoubtedly—with due discrimination of cases—not those whose days are numbered. Then, many with bronchial affections. More especially are the cases of comparatively dry, irritative cough, and uncomfortable throats, benefited by the soft air along the St. John's river. Many go to St. Augustine, but as our experience compels us to say, with far less advantage—sometimes with positive harm. The immediate proximity of the sea is the difficulty. However delightful it may be to feel the crisp, fresh breeze coming in from the sparkling, sunlit ocean, over which one gazes with such delight, from the shores down to whose margin the quaint old town has crept, and lazily dreams away its tropical existence—there is danger. We have observed marked aggravation of symptoms in bronchitic patients who had come from Jacksonville, or farther, to St. Augustine. A few days only sufficed to show the necessity for immediate return—a favorable result justifying the action. There are many other affections, however, which the more bracing air of St. Augustine would suit far better than the mild, relaxing climate of the interior of Florida. Persons suffering from that nervous or general debility previously alluded to—loss of tone and vigor—or from the so-called "breaking down" from over-work; and doubtless from a variety of other ailments—would do well by sojourning for a time in this oldest town of the States—sauntering among orange groves, or through gardens fragrant with full-blown roses in March—floating out on the bright waters, to the signal disturbance of

the shoals of pelicans and other sea-fowl which so picturesquely fill the coves and inlets. The climatic change and contrast obtainable in so few days' run from the North, is very striking, and seems like magic. Leaving snow-drifts and bitter, howling winds in Boston, the last of February or first of March, Jacksonville is easily reached in about four days from New York; and you are, as it were, in our mid-summer, breathing a soft, delicious air and surrounded by a wealth of bloom.

Florida is liable to sudden and marked changes of temperature in winter, and sometimes during March. Invalids should be forewarned of this; and the fact constitutes a strong objection to visiting the country too early in the cold season. Some writers have lauded the western or Gulf side of the State as favorable for the establishment of sanitaria. Disternell, in his work on the "Influence of Climate in North and South America"—quoting apparently from Dr. Perrine—cites Key West, and Miami, on Key Biscayne Bay, as "most desirable points for establishing such facilities." Key West is so far to the south that the "Northers,"* so powerfully felt high up on the Gulf coast, are doubtless much modified before reaching it—although we have known them sufficiently decided in the city of Havana. When we reach a point so far to the north on the Gulf coast as Pensacola therefore, we are not surprised at the following opinion adverse to the establishment of sanitaria there, or in the immediate neighborhood, from J. Winthrop Taylor, M. D., U. S. N., for many years stationed at Pensacola. "There," he writes, "during the winters, cold northerly winds prevail, accompanied by heavy rains. These, in my opinion, are insuperable objections against establishing sanitaria in that locality."

Dr. George Hayward, of this city, during a short visit to the South, some years ago, was much struck by the advantages offered as a winter residence for invalids, so far as climate was

* "A fierce, chilly wind, peculiar to the Gulf of Mexico." (Disternell loc. cit.) It visits Texas and is well known farther to the South, prevailing at about weekly intervals, from November to March.

concerned, by a place in the southeastern part of Alabama. At our request, he has furnished the following short account of its features:

"It is about twenty miles from Pensacola, Florida, situated on the Perdido river, which divides Florida from Alabama. The soil is dry and marly, well suited to raising vegetables, but not strong enough to grow cotton. Pine trees abounded, and the winds from the Gulf of Mexico, distant a mile or two, came through them loaded with a balsamic fragrance that made it a pleasure to breathe. The drives in the neighborhood were pleasant, wild game abundant, and, from what I could learn from those residing there, the changes in the temperature were much less severe than on the Atlantic coast, the weather being for the most part, like our finest October weather, excepting that once during the winter, ice formed as thick as window-glass, which was considered very remarkable.

"The climate of this region on the Perdido river was regarded, during the Spanish occupation of Florida, as very favorable to diseases of the lungs; and, as it is very accessible, by water, from Mobile, it may yet be selected as the site of one of the sanitaria which will doubtless some time be established in this portion of the South."

On account of the extreme and sudden changes of temperature thus occurring, many persons now remain, by choice, at the North through most of February, and with more benefit, also, than they ever experienced in Florida, up to that time—but, when the season of melting snow and raw East winds sets in, they escape to the South without delay.

Savannah, Ga., is a very pretty city, and charming to the voyager from the chilly North, as he comes up from his vessel into its balmy atmosphere, and looks out from the windows of his hotel upon the "Square," so pleasantly dressed in the fresh green of Spring; or drives through its shaded and unpaved streets, along which, with their characteristic "lope," the fine southern horses so noiselessly bear their skillful riders; or wanders through the cathedral-like aisles of Bonaventure Cem-

etery, where the long gray mosses droop from the trees, and sway, rustling and sighing in the wind, like banners hung above the dead.

A pulmonary invalid is not likely to linger long in Savannah; at least such is the opinion we have formed from observation and inquiry. There is a great deal of humidity in the air, the situation of the town is mainly flat, and its surroundings, with some exceptions, uninteresting. Yet there are, doubtless, certain cases which would do well there—and many southern localities can only be fairly tested by a personal trial of their climate.

Aiken, S. C., long known as possessing a favorable climate for many pulmonary ailments, is most easily reached by rail from Charleston. Easily is here a relative term, however, for, as on most of the southern railways, the rate of progression is snail-like, and the extremely frequent pauses seem unnecessary. The roads are, generally speaking, in very good condition—the traces of war disturbance having been mostly done away—but a little more energy and foresight in their management are certainly demanded. When the transportation of invalids is in question, the matter sometimes becomes very serious. The distance from Charleston to Aiken is about one hundred and twenty miles; our last trip over the road was by night-train, starting at 7 o'clock. The run—or rather the creep—was made in about twelve hours, an average of about ten miles to the hour! The usual average on southern railways is, perhaps, some miles better—on some, however, not more than twelve or thirteen miles an hour. How we did stop, and sit still, on that night ride! Now, to take in water—after just having left a station, where, seemingly, it might as well have been supplied; then for the conductor to leave some parcels at a way-side inn," or something resembling one—and to have a little chat, sociably, with the occupants; then, apparently, with no purpose whatever, unless to use up time—out in the moonlit pine woods, with occasionally a "lightwood fire burning near the track, and a darky or two sidling about! Very picturesque,

doubtless, but how about the worn-out sick man or woman, watching the hours, and longing for the journey's end?

The village of Aiken is hardly prepossessing, and straggles about a good deal over its flat, sandy plain, with here and there (especially in its outskirts) some neat homesteads, showing careful hands beginning to make improvements. Most of what may be termed spruce about it, however, must be referred to the neighboring woods. Hotel accommodation is good, and private board and lodging, of fair quality, may be obtained. There are two hotels—the Aiken hotel in the centre of the town, and the Highland Park Hotel. The latter is new, and is finely situated, at one end of the main street, commanding a wide and pleasing view over a densely wooded valley, beyond which some well-shaped hills break the monotony of the desolate "pine-barrens."

In this connection, it gives us pleasure to refer to the establishment of Dr. W. H. Geddings—"The Pines." Dr. Geddings is a son of Dr. Geddings, of Charleston, South Carolina, and is well known at the North as a thoroughly educated and most competent practitioner. He refers, in his printed circular, to some of the best physicians of New York, Philadelphia, Baltimore and Richmond.

In all frequented sanitaria, it is a trying sight—even for the healthy, passing traveller—to witness such a collection of sufferers in various stages of disease—in fact, it is one of the great drawbacks of health-resorts at the South. Yet it is wonderful how soon one becomes accustomed to the inevitable presentation of the ills to which "flesh is heir"—so that grim jokes, even, fly about at the expense of the invalid corps, such as the quasi word of command, "time for the consumptives to take exercise," or, "hour for the march of the skeleton brigade!" and these somewhat forced gaieties not infrequently come from members of the "forlorn hope."

In this genuine pine-barren district, the atmosphere is very dry and pure, and, like that of nearly all the surrounding country, admirably suited to many cases of serious lung dis-

ease. A sufficiently careful discrimination of the kinds of cases, is, however, hardly ever made; and it is to be hoped that some one of the excellent resident physicians of the region will set forth from the teachings of their large experience some hints for guidance in this direction. And we can not too strongly insist upon the wisdom and importance, for the benefit and comfort of invalids about going South, of a prior correspondence between their medical advisers at home and those about to have the care of them, as to the advisability of their going, and the fitness, or otherwise, of any particular climate or locality in their cases. Too often persons with pulmonary trouble rush southward without any proper advice, in a purposeless way, nearly certain to end in disappointment and aggravation of their illness.

Our own impression in regard to the climate of Aiken and its vicinity is that many consumptive cases, where cough is accompanied by profuse expectoration, would be benefited by the dry, somewhat bracing air. The contrary would be likely to prove true of cases of irritative bronchitis, with dry cough, or with but little cough, and only slight secretion from the bronchial mucous membrane. Rather injurious effects of the climate in these cases, came under our observation—the throat became dryer and more irritable, and the transpiration from the skin nearly suppressed; whereas, in Florida, with but little, if any, difference in temperature, perspiration was very free—and the softer, more humid atmosphere soothed the irritated lining of the air-passages.

Since the above was written, a valuable article by Manning Simons, M. D., of Charleston, S. C., and published in the "American Journal of the Medical Sciences" for January, 1872, has attracted our attention. It is entitled "Climate in Relations to the Production, Progress, Amelioration and Cure of Consumption," and will repay the careful perusal of all interested in so important a topic. It is with much satisfaction we find our impressions of the various southern climates confirmed by so accomplished an observer as Dr. Simons, whose

evidence derives great additional force, from the fact of his familiarity with their merits and demerits by residence. Speaking of advanced cases of consumption, he remarks as follows: "As to the application of climate to the already developed disease advanced to its later stages, when cavities have formed, or extensive consolidation exists, we may throw our information into the general statement that a locality possessing a warm, dry, moderately stimulating atmosphere, free from excessive variations, is, to the largest number of cases of this character, most suitable." And, consequently, in this connection, he says: "In Aiken, S. C., is found a locality possessed of a climate characterized by dryness, moderate range of temperature, comparatively free from extremes of variation, a mean temperature of 61–69°, a tonic property of atmosphere, and a position one hundred and twenty miles from the sea, with an elevation of six hundred feet above the sea level—properties rendering it eminently suitable to this class of cases." A degree of parallelism between the climate of Aiken and the so highly lauded climates of the South of France is alluded to by Dr. Simons in the article referred to; and "the great advantage the invalid derives from being able to spend so much time, day after day, in the open air, in consequence of the equable temperature, clear sunshine, and dryness of the air."

Another point of great importance, and to which we have already referred particularly, when writing of St. Augustine, is the effect of a sea-coast air, on those suffering from pulmonary disease Here, again, we are glad to find that our conclusions, independently made, are most decidedly ratified by the observations and experience of Dr. Simons—who also cites many high authorities to the same effect. We quote, again, from the same paper mentioned: "That the pure air of the open sea acts in a very favorable manner, we have excellent authority, but it is not so clear that the air on the sea-shores is, as a rule, sanitary in its effect." We think it is very "clear" that, in most instances, in the class of affections alluded to, it is very far from "sanitary," often, indeed, injurious, or even

perilous. Very strong opinions on this vital matter are enunciated by Dr. Simons—thus: "Experience has amply proved that a mixture of land and sea air, such as exists on all our maritime stations, is unfavorable to delicate lungs, and especially where there is phthisis, or even a disposition to it." He cites several writers, and refers also to certain apparently opposing facts to the above conclusions—the remark, for instance, of Walshe, that while "islands and coast-districts are said to be favorable to the development of phthisis, yet observe that the natives of the Azores, Madeira, Iceland, the Faroe Islands, Marstrand and on the coast of Sweden, spots climatically various as their sites, suffer very slightly from the disease"; and adds Dr. S., "according to Dr. J. E. Morgan, the disease is rare on the northwest coast of Scotland." *Per contra*, "Fuller states that along the shores of the Mediterranean, in Malta and Madeira, to which localities consumptive individuals are commonly consigned, the ratio of mortality among the natives, from phthisis, equals, and even exceeds, that which obtains in England."—[Simons, *loc cit.*]

Notwithstanding, therefore, a certain amount of conflicting testimony, we believe the preponderance of evidence to be in favor of inland, high-lying districts, over sea-coast localities, even in warm climates, not only for serious pulmonary difficulties, but also for what are deemed comparatively slighter ailments —an opinion decidedly expressed, in nearly the same terms, by the writer to whom we have so freely referred. The opinion is, of course, not new; and it is especially fitting, in such connection, to mention the late researches of a distinguished Fellow of this Society,* affording convincing proof of the preference of phthisis for low-lying lands and wet soil. The main point, however, is the choice to be made, by invalids at the South, between seaside and inland, with the same, or nearly the same, temperature.

Our own observations of the climate and peculiarities of the

* Henry J. Bowditch, M. D.

region around Aiken were mostly made at and in the neighborhood of "Montmorenci Park"—formerly known as Montmorenci Springs—about four miles from Aiken, and a most admirable site for a sanitarium. From Montmorenci House, one looks down upon a valley suited to almost any crop, devoted, in part, along its farther slopes, to vineyards, and begirt with the almost ubiquitous pine woods. The grape cultivated is mostly the "Scuppernong," from which a very good wine and passable brandy are made. The soil is of reddish clay and sand. In the centre of the valley, corn and sweet potatoes are grown. As we gazed over this fair expanse in March—our so rude and boisterous month at home—the thermometer registered 78° F. at about 9 o'clock A. M., in the shaded piazza. This was rather higher than the ordinary range for the time of year and hour of the day—and higher than we subsequently noted it, but not by many degrees. Flowering shrubs were in bloom, and everything imaged the lovely June days of New England. In the pine woods, the beautiful wild fleur-de-lis was pushing its bright petals, here and there, through the thickly-strewn pine leaves, and the jessamine swung its light bells, in profusion, all around.

The extreme evenness of the range of temperature will be remarked, and also the continued pleasant weather and uniform dryness of the air. In a recent letter, Dr. Jewett says: "The time for invalids to be benefited is from the middle of January to June—and, in some seasons, July. From November to the middle of January, the weather is very variable and sometimes very cold. The cases most benefited are those of pulmonary hæmorrhage—not too far advanced—and bronchial cases of the humid type. Cases of tuberculous disease are no better off here than in any other warm climate. Those who have suffered from protracted fever and ague are always benefited by a residence here." So far as regards the pulmonary cases, we had reached the same conclusion—as noted in another part of this paper.

In reviewing this somewhat desultory sketch, it may safely

be said that while a perfect and most unexceptionable health-resort can hardly be found in the region which has most occupied our attention, certain portions of Florida, on the whole, give us the nearest approach to such a locality. Of late, among the sanitary island-resorts, Nassau, New Providence—Latitude, 25° 5′ N., Longitude, 77° 20′—has been a favorite. Personally, we have no experience of its merits, but, from frequent conversations with those who have, we conclude that it has a warm, delightful, but still rather a humid climate, which, therefore—as might be expected—while it answers admirably the requirements of certain cases, has been decidedly adverse, or at least neutral, in its effects upon others.—*Boston Medical and Surgical Journal.*

ANALYTICAL DEPARTMENT.

"Qui e nuce nucleum esse vult, frangit nucem."—PLAUTUS.

Cæsarean Section Successful both for Mother and Child.—Dr. Jacobs, of Cologne, reports that a woman, aged forty-two, multipara, was delivered two years before with difficulty by the forceps. The conjugate diameter was barely two inches; the horizontal rami of the os pubis were so driven inward that the symphysis pubis projected like a beak. A careful examination showed that she was suffering from osteomalacia of the pelvis. As the child was living, it was, after consultation, decided to perform Cæsarean section. The patient was placed under chloroform, and the abdomen was rapidly divided through the linea alba, care being taken to empty both bladder and rectum previously. The incision into the uterus struck upon the placenta, which was detached as far as was requisite to remove the fœtus. The placenta was removed immediately after the delivery of the fœtus, without any difficulty. The uterus was then compressed and squeezed downwards. No

sutures were placed in the uterus, only in the abdominal walls, which were brought together in the usual manner. There was some sickness from the chloroform, which was arrested by the internal and external administration of ice and ice-water. Only a portion of the abdominal wound healed by first intention; the rest granulated. Dr. Jacobs considers that the successful result was mainly due to the rapidity with which the operation was performed, and the application of ice.

[This is the third successful case that has been reported lately: two were by pupils of M. Depaul, who strongly advocates the immediate removal of the placenta and the non-use of sutures to the uterus. He also recommends the insertion of a long seton through the two wounds, and out through the vagina. This method was adopted in each of the cases of his pupils.]—*Lon. Med. Rec. from Berliner Klin. Wochenschrift.*

Death following a Vaginal Injection.—The following case is recorded ("Allg. Med. Central.-Ztg.") by Lorain as one of those occasional instances where death has appapently been due to some mild manipulatory procedure on the female genitals: A young girl, sixteen years of age, of delicate constitution, and who had commenced menstruating three months previously, entered the hospital to obtain treatment for vaginitis. A decoction of althæa was employed as an injection at first, but it was soon changed for a solution of nitrate of silver (gr. x ℥j.). This fluid was injected without force, the greater part returning through the vagina. Immediately afterwards, however, the patient complained of pain in the belly, and it increased so violently that she tossed about in the bed, her eyes became fixed, the skin became cold, the pulse small, and the face pinched. These severe symptoms abated after three hours; but vomiting then set in and continued, though on the following day the pain in the belly had moderated. Some days after, while the vomiting was still persisting, and she was suffering great distress, she gave a sudden cry and died. Tardieu made the autopsy, and found a purulent inflammation of the mucous

membrane of the uterus, and the Fallopian tubes filled with pus. They were discharging into the peritoneal cavity, and there was diffuse peritonitis.—*Med. Record.*

Leeches for the French Army.—The number of leeches required for the French army hospitals exceeds 100,000 per annum. The supply for the next three years is about being contracted for, at an average price of 125 to 135 francs the thousand.

A special commission is charged with the care of receiving the leeches from the contractors and verifying the number and quality. They must be of the kind denominated *vertes* (green), or *grises* (gray), from either France or Hungary, or of the description called *dragon*, from Algeria.

After being counted they are placed on a horse-hair sieve to drain; the largest ones are taken one by one and made to disgorge, as they are not accepted when they contain more than fifteen per cent. of their weight in blood.

After this operation, the leeches are weighed; a thousand should reach 1750 grammes, while their individual weight should be, for the smallest, one and a-half grammes, and for the largest, not over two grammes.

Taking as a basis of cost 130 francs the thousand, the total of the three years' contract should reach nearly 40,000 francs. —*Med. and Surg. Rep.*

On Iced Clysters in Dysentery.—Dr. Wenzel ("Annales de la Société de Médicine d' Anvers et L'Independente"), having had an occasion to treat a great number of cases of dysentery, has found the best remedy to consist in the injection of ice-water into the rectum. The first case he treated in this way was one of severe dysentery. There was intense fever, abdominal pains, excruciating tenesmus, and profuse sanguineous evacuations. To check the hæmorrhage, injections of ice-water were ordered every two hours, which not only caused the sanguineous evacuations to cease, but also removed the

tenesmus, enteric pains, and fever. The beneficial effect of these injections was so evident that the patient urgently demanded their repetition whenever the pains threatened to reäppear. Dr. Wenzel considers this treatment more satisfactory than any other in acute cases, although in chronic cases it can only be expected to afford temporary relief.—*London Medical Record.*

On Drainage of the Abdominal Cavity.—In No. 38 of the "Berliner Klinische Wochenschrift," Dr. Eugene Hahn, of Berlin, communicates a case of ovariotomy in which he put in practice the intraperitoneal injections recommended by Peaslee, and the drainage of the abdominal cavity, recommended by Marion Sims in 1873. Sims shows that twenty-four of the thirty-eight fatal cases amongst Spencer Wells' operations, died from septicæmia (Beigel's translation). Nussbaum says that his twenty-eight deaths after ovariotomy all resulted from the same cause. He thinks that twenty-three of them might have been saved by the use of the drainage-tube. Spiegelberg, in his pamphlet on the diagnosis of cystic myomata of the uterus, says that eight out of fourteen fatal cases were so from septicæmia, and might have been saved by drainage and the use of disinfectants. This treatment is applicable to many other cases than ovariotomy.—*Ex.*

CLINICAL RECORDS.

"Ex principiis, nascitur probabilitas: ex factis, vero veritas."

ART. I.—REPORT OF A CASE OF EXTRA-UTERINE FŒTATION, WITH ABORTION AT FOUR MONTHS' GESTATION OF THE LATTER. By JAMES J. McGEE, M. D., Symsonia, Ky. [Read before the Marshall County Medical Society.]

Mr. President,—Very kindly having further time given me for my report by this Body, at its last semi-annual meeting, held at this place, I now proceed to make report, as follows:

Was called, October 12, 1872, to visit Mrs. R., aged twenty-eight. Ascertained from her previous history that her health had been good up to July, 1872, at which time she supposed herself pregnant, suppression of the menses occurred, morning sickness and vomiting followed, attended with the sympathetic train of symptoms usually attendant on early pregnancy. She did not, however, suffer much inconvenience from her condition. This state of health continued up to the day previous to my first visit without any appreciable intercurrent change or complication. I found her suffering with intense, sharp-cutting pain in the hypogastric region, encircling the lateral walls of the abdomen, occasionally remitting in severity, very much simulating incipient labor pains, with a constant tenesmic pressure in the whole intra-pelvic space, and inability to rest in the recumbent position, preferring to retain a crouched position, averring it was the only position she could assume to mitigate her suffering. Her skin was in a normal condition; tongue clean; pulse about 100; appetite depraved; bowels constipated; slight dysuria for twenty-four hours.

Upon examination per vaginam, I found the os slightly fissured, with the cervix uteri lower down in the pelvis than in health. It is well to remark here, that there was not at that time marked retroversion or noticeable infringement of the cervix upon the urethra, so as to impede the flow of urine; but a slight tilting forward of the cervix uteri, associated with a change in the relative situation of the body; the latter portion of the organ resting against the sacro-vertebral angles. I ordered anodynes, diuretics, a saline purge, and rest in the recumbent position.

October 13th.—I saw her again on the night of the 13th, and found her suffering much increased; relieved only by an opiate; her pains more persistent and less remitting in character. Could not induce her to keep a recumbent position. The bowels had been freely moved; voiding urine more freely. The tongue furred and dry; some thirst; skin moist and dry alternately; pulse 100, with increased volume. No change in the

relation of the intra-pelvic organs. Tenesmic pressure still exists, to the great annoyance of the patient. Gave her an enema, continued anodynes and diuretics, with strict orders to rest in a recumbent position.

October 14th.—Found her condition much improved, pains not so great. She now takes food with moderate relish. Still taking opiates, though at longer intervals and less in quantity. She could now, for the first time since her illness, rest in the recumbent position.

October 15th.—Improvement still progressing; treatment continued as indications required. I now left her to attend the Medical Society convened at Paducah, Ky.

On the 16th ult., I learned from her husband that her condition seemed much improved up to the evening of the 17th, her suffering now returning much increased. Her husband believing it necessary that she should have further attention, and not being apprised of my return, called Dr. D. G. Smith, of Benton, Ky. The Doctor soon arrived, and learning that Mrs. R. had been under my professional charge, requested that I should be sent for immediately. The history of the case now revealed that she had enjoyed comparative immunity from suffering since my last visit, until late on the preceding day, when, to her great discomfort, she experienced a return of all the physical suffering, followed by retention and incontinence of urine. On introducing the finger per vaginam, the uterus was distinctly felt occupying the lower and posterior aspect of the pelvic space, the fundus had partially fallen underneath the angle of the sacro-vertebral prominence, its posterior surface pressing against the anterior aspect of the rectum, producing tenesmus, soreness, and pain in the latter organ. From the weight and circumscribed character of the uterus, and the resistance yielded upon the touch, it was adjudged to contain a fœtus of three and a half months' gestation. The os was soft and dilated to about the size of a nickel. The cervix uteri was directed forward and upward under the pubic arch and to the right of the mesial line of the body. On placing the hand

over the hypogastric region, a tumor of unusual hardness and firmness was felt, extending from the crown of the pubic arch upward to the umbilicus. The abdomen was tender to the touch, and considerably distended and tympanitic, presenting the size of pregnancy at five months' utero gestation. Not having examined the abdomen, together with statement from patient that she had passed small quantities of urine at different intervals during the night, it was feared that some abnormal growth, the precise nature of which we did not understand, existed; and, believing it just to the patient that she should have the benefit of further counsel, it was agreed to invite Dr. J. W. Singleton, of Florence Station, Ky., in counsel. The Doctor having arrived, we related the previous history of the case, and, at my request, he proceeded to a careful examination. Before directing his efforts at a digital exploration of the intra-pelvic organs, it was deemed advisable to introduce the catheter and empty the bladder, in order to a more perfect and easy diagnosis, and to our surprise an immense quantity of urine was drawn off, amounting to something near a half gallon, clearly evincing that we had mistaken an enormously distended bladder as an omen portending some serious malady in the utero-abdominal region. Such was the immense distension of the bladder, its circumference illy defined with a tumid, tympanitic condition of the abdomen, coupled with the above-mentioned statement of the patient, we were misled as to the true nature of the abdominal tumor, and caused to suspect the probability of an abnormal growth. An attempt was now made to reposit the uterus in proper relation with its neighboring organs, the patient having been previously placed in a supine position, with her legs flexed, and requested not to resist the pressure employed in the attempt, but in this we were foiled. It was now thought advisable to change her position, requesting her to turn on her face in bed. She was required to draw up her knees until her thighs were brought in a vertical position, letting her breast rest on a plane level with her knees. Elevating the pelvis to the highest possible point, two

fingers were introduced, and in this way a second attempt was made to reposit the uterus; but in this, as in the preceding attempt, we had the misfortune to meet with disappointment. The parts being so tender to the touch, she was unable to bear the pain consequent upon the pressure employed in attempting to reposit her womb. She was then requested to submit to the administration of chloroform, but having such a horror of the wonder-working remedy, she declined, preferring to remain conscious, and asked to be spared any further manipulation for the time and allowed to rest as best she could. The catheter was now introduced, with a sponge attached to absorb the drainage, and retained in situ, with a hope that the malposed organ would correct itself by relieving the pressure from the distended bladder, and by the aid of prone position, with the hips elevated, which position she was requested to assume at various intervals. Ordered an enema and anodynes. The case was now dismissed, to be seen by Dr. Smith and myself on the following day.

October 19th.—Learn from the nurses that our patient had suffered much lumbar and hypogastric pain, attended with restlessness and tenesmic pressure in the whole intra-pelvic space. Tongue coated over with brown coat; thirst increased; pulse 96; breathing normal; bowels had been moved by enema; the bladder distended to a less degree than on the preceding day, though full and hard with constant dribbling of urine. The patient stated that the catheter had been retained in situ, and kept the bladder empty and well drained until about 12 o'clock in the night, at which time it ceased to perform its proper office, its fenestra becoming plugged with mucus from the vesical mucous membrane, effectually occluding the flow of urine through the cavity of the instrument. It was now clearly manifest that this method was insufficient to carry out the end in view. It will, I hope, be remembered that it was impossible for either Dr. Smith or myself to remain in constant attendance and observe the progress of this lady's case, both having other professional charges equally entitled to our constant pro-

fessional care and close attention. It was, therefore, agreed to instruct Mrs. R. in the use of the instrument (which was very easily done), thereby avoiding much trouble and vexation to ourselves, and pain and suffering to the patient, with a hope of still being able to relieve the retroverted uterus.

That quaint and fluent writer, Dr. Meigs, tells us, speaking of retroversion, that "many samples have been met with of the womb restored to its normal position by taking off the pressure of the bladder." The same writer mentions a case, as described by Dr. Ingleby, in which "the womb remained retroverted at the fourth month of pregnancy, notwithstanding the catheter. Dr. Ingleby advised that it should be introduced every four hours."

In this case, notwithstanding the fundus was almost down to the anus, on the third day of repeating the catheterism every four hours, the womb was restored to its natural position. Confessing little faith in the restorative power of the ligamentous attachment of the uterus to restore a jammed and impacted uterus to its normal position, at three and a half or four months' gestation, yet I felt it to be a duty we owed to the patient to give her the slender chance of the last alternative.

October 20th.—Learned that during the evening and night subsequent to our last visit, diarrhœa had occurred, unattended with any fæcal deposits, and of a dark, fetid liquid character, resembling decomposed animal tissue macerated in a turbid liquid, with more or less detachments of mucous flocculi floating in the midst of the putrescent mass. The diarrhœa seemed to be produced by a mechanical irritant body lodged in or about the middle or upper portion of the rectum, attended with great and perplexing tenesmus, and occurring only as the result of an effort to free the bowels from the offending substance. Unfortunately for science and the satisfaction of her attending physicians, most of the dejections had been cast away; the nurse's attention, however, had been attracted by the peculiarity of the stools, and she very wisely preserved a sample of the latter for our inspection. Upon close examination, two bones

with several fragments were detected. It affords me pleasure to be able to present here these bones for your inspection and consideration. It would be useless and unnecessary to attempt a description of these bones, their examination will give you a far better idea than any description I could give. It will be seen that they present the appearance of the long bones of the human subject, though their peculiar characteristics are somewhat obscure from decay and maceration in the fluids, having lost much of their periosteum and much of their spongy tissue.

It will be sufficient to state in this connection that they are unquestionably the bones of an extra-uterine fœtus; their identity with fœtal bones was subsequently proved by comparison and correspondence in size with the bones of a fœtus at four months' gestation. These two bones, with others that passed on the subsequent day, are plainly recognized to be the two femoral bones—tibiæ and scapulæ—the others being mostly fragments, except a few short bones that are not distinctly recognized. As before stated, and as will readily be seen, these bones are so blackened and decayed, their periosteum and spongy texture being mostly absent, it is very difficult to distinguish their true anatomical characters and determine their proper location and attachments in the body. Fever was now lighted up, and, from the facts before us, we much feared would consume the patient with a fatal peritonitis. She complained a great deal of pain in the back; tongue furred, brown; pulse 100 and feeble; skin hot and dry; very thirsty; large quantity of urine drawn per catheter; uterus still firmly fixed low down in the pelvis, and the parts very sore to the touch; ordered supporting treatment; anodyne to relieve pain. Left her with a promise to see her again on the following day.

October 21*st.*—Rested better last night; still resting well this morning; some cheerfulness manifested for the first time since her illness; the bowels moved three times since we left her on yesterday; some characteristic discharges; several small bones and fragments of bone came away, attended with same disagreeable odor as on yesterday; no fæcal matter present in

the dejections; the uterus still unchanged; large quantities of urine drawn off per catheter; pulse 90; in other symptoms no change. Dr. Smith now leaves the case in my charge. Supporting treatment continued, with enema every six or eight hours.

October 22*d.* — Resting quietly; free from pain; tongue cleaning; pulse rate about the same; appetite improved; thirst subsided; skin moist; occasionally bathed in profuse perspiration; bowels moved twice since day before; stools presenting same characteristic appearance, mixed with small quantities of fæcal matter; abdomen more flaccid and compressible; uterus low down in the pelvis; the os slightly dilated; urine still drawn per catheter; intra-pelvic soreness slightly improved; no change in the treatment.

October 23*d.*—Preferring not to weary your patience with every detail, it will be sufficient to notice, by way of summary, the most prominent features in this case, embracing a period of five days, during which time nothing of special interest occurred. Her condition continued pretty much as it had been during the two last days, interspersed with intervals of suffering and ease; diarrhœa was almost a constant symptom. Retention of urine continued, and was relieved only by the use of the catheter; pulse rate ranged from 84 to 100; slight febrile exacerbations would occur, though ungoverned by any law of periodicity; thirst more or less prevailed; appetite irregular, though she had taken food at my request; the digestion and assimilative powers seeming unimpaired; stools continued dark and fetid, and mostly of a fluid character. Several scales and fragments of bone passed but no whole bones; small quantities of fæcal matter occurred in each stool; tenesmus and tympanitis more or less prominent symptoms, despite the use of the catheter to relieve pressure from the bladder, favored by position; the uterus remained firmly fixed low down in the pelvic canal. This brief summary, embracing a period of five days, now brings us up to the morning of the 28th.

Being sent for in haste, I was told my patient had grown

worse. I arrived and found her in labor; believing the fœtus to be dead, and in view of her situation, I regarded its expulsion to be the sine qua non of my patient. I, therefore, made no effort to stay what I regarded as a conservative effort of nature to rid the uterus of an irritant and offending substance, and had I done so, I suppose my efforts would have been unavailing. Contractile efforts of the uterus were feeble; but regular and well timed; the os dilated slowly, but gradually yielding to the influence of the contractile power of the uterus, the fœtus was soon expelled, followed after some delay by the placenta; labor being being terminated in about eight hours from its inception to its close. This delay in labor I regarded as rather remarkable, occurring at so early a period of gestation, and especially in view of the marked regularity of the pains, and unattended with any of the serious complications of labor, I could only account for it in this way; that there was a want of parallelism of the long axis of the uterus with the proper axis of the inferior strait and vulva. The uterus being in a retroverted state, the cervix uteri was directed forward under the pubic arch, directing the vis a tergo force against the pubic bone, instead of being directed in the axis of the vulva—uterine strait. Delivery was unattended with hæmorrhage or serious consequences of any kind; on the contrary, the patient expressed herself as feeling comfortable and free from the exhaustion and fatigue usually consequent upon labor at a more advanced period of gestation. And happily she escaped the evils attendant on abortion and early miscarriage. The fœtus was well developed, and exhibited signs of having been dead only a few days. The patient was now directed to subsist on nourishing diet; use an enema to move the bowels if required; promising to see her on the succeeding day.

October 29th.—My patient now begins to exhibit unmistakable signs of a rapid and speedy convalescence. Her flesh having been much reduced, attended with great prostration of the vital and conservative forces consequent on long suffering and gradual waste of the body, it was, of course, expected that con-

siderable time would be required in order to even a healthy exercise of the functions of the body, if, indeed, sound and perfect health was ever restored. The most obstinate difficulty now in the way perplexing my patient was tenesmus and retention of urine. The latter symptom, arising from paralysis of the bladder, lasted a fortnight after the expulsion of the fœtus, requiring the use of the catheter as the only effectual means of relief. The tenesmic pain and uneasiness in the rectum were doubtless due to two causes; first, the pressure of the uterus against the anterior surface of the gut, interfering with the descent of its contents, producing a constant desire to evacuate the bowels; secondly, an ulcer situated probably in the upper portion of the rectum, through which the contents of the extra-uterine cyst were discharged. It is, I think, evident that there was an opening from the rectum communicating with the cyst, in which the extra-uterine fœtus was enclosed, otherwise the uterus or bladder would have become, in the event of any escape, the reservoir of its contents; the latter organs furnishing no such evidence. The uterus, through proper manipulation and the aid of nature, soon regained its proper axis. The lochia were scant, lasting only a few days. Tenesmic pain and uneasiness gradually disappeared. The preternatural actions of the bowels, which had existed since about the 20th, continued up to about the 2d or 3d of November, characterized by the same disagreeable odor and dark liquid stools, seeming to become more and more mixed with fæcal matter, until the latter regained a healthy appearance. Her appetite and strength continuing to improve, my patient had a happy and successful recovery, and is now in the enjoyment of sound health, and has not, to my knowledge, had a day's sickness since her final recovery.

REMARKS.

This, gentlemen, is certainly a very anomalous and remarkable case, and interesting in view of the extreme rarity with which such cases occur, and the many points of practical bearing considered in its occurrence. Nowhere, in all my reading,

have I ever noticed the mention of such a case. It is certainly unique and unparalleled in some of its features. Many instances of extra-uterine fœtation have been recorded; but the occurrence of extra-uterine pregnancy occurring or complicated with pregnancy in utero at one and the same time, is certainly one of the rare phenomena coming within the scope of obstetric science. It is evident that the danger consequent on such grave complications must be great. In connection with the danger incident to abortion in utero, was the extreme peril in extra-uterine pregnancy. The blighted extra-uterine fœtus exposed the patient to the danger of pregnancy in that unnatural situation, simultaneous with the danger of abortion in natural pregnancy. Great must have been the risk to escape the fatal ending of so grave an issue.

We can not better define extra-uterine pregnancy than to quote from that able and learned gentleman, Dr. G. S. Bedford. This able teacher, in his work on the "Pinciples and Practice of Obstetrics," says: "When fecundation has been consummated and the vitalized germ does not reach the uterus, it is because of some derangement which has contravened nature. The development, therefore, takes place not within the uterine cavity, but at some point external to it, hence this form of pregnancy is denominated extra-uterine."

It is clearly manifest, then, that in pregnancy occurring entirely outside of the uterine cavity, from which situation there is no natural outlet, great must be the danger to the pregnant woman whose unhappy lot it is to become a mother under such unnatural and unfavorable circumstances.

DIAGNOSIS.

It will be seen at once, in view of the great complication in this case, that to diagnose an extra-uterine fœtus prior to the evidence furnished us by the discharge of the fragments, was extremely difficult. We are informed by authors that for the first three or four months of extra-uterine fœtation, there is nothing to guide us in the expression of a positive opinion. The extra-

uterine fœtation, therefore, in this case, being complicated with uterine gestation, it is easy to appreciate the difficulty in making out a positive diagnosis. Suppression of the menses occurred, though the latter fact, with the entire sympathetic phenomena, was attributed to pregnancy in utero. No pulsation of the fœtal heart could be detected. There was not present marked irregularity of the abdominal wall by prominence or unusual enlargement of either side. The only symptom of diagnostic importance was the intermittent pain, which was probably produced by the contraction of the cyst, in which the embryo was contained. This latter symptom was overlooked at the time, in that light, and regarded as the result of the malposition of the impregnated uterus.

VARIETY.

In view of the history of this case, showing as it does a lack of symptoms characterizing the tubal, ovarian, and interstitial varieties, the symptoms in each of these varieties being generally more fully developed and easily understood, because of the firm and unresisting character of the cyst in which the embryo is enclosed, it being chiefly made up of muscular tissue; in these situations, together with the absence of pain or other constitutional disturbance, other than such as are common to pregnancy in utero, I pronounced this case abdominal pregnancy, though the precise seat of growth was not ascertained, as before remarked. Pain, more or less marked, of an intermitting character, is a frequent symptom of the tubal ovarian and interstitial varieties, the cyst being composed of muscular fibre that surrounds the embryo in these situations. The cyst in the abdominal variety being composed of an exudation, and consequently not possessing the same unyielding firmness and organized structure of the other varieties, is not endowed with the same contractile power, hence the greater absence of pain in this variety. Contrasting these facts with the fact that Mrs. R. was free from pain up to a few days prior to the passage of the fœtus in fragments, it is strong presumptive evi-

dence that she labored under abdominal pregnancy. In further support of my belief in this variety, I will give the statistics of Professor Hecker, as shown by Dr. Bedford. According to Prof. H., there is a marked difference in the mortality of the abdominal and the other varieties. The tubal and interstitial varieties almost invariably proving fatal. In the tubal species, sixty-four cases are mentioned, with only one recovery. In the abdominal variety, one hundred and thirty cases are given, with fifty-six deaths, giving a mortality of forty-two per cent. The interstitial variety is said to be as fatal as the tubal. From some cause, the per cent. of mortality in the ovarian variety is not given by either of these gentlemen. In view of the great difference in per cent. of mortality in these different species of extra-uterine fœtation, it would appear quite presumptive of abdominal pregnancy in Mrs. R.'s case, especially when we remember the complication of abortion in utero and retroversio uteri, she having had a successful recovery.

ATTACHMENT OF THE PLACENTA.

In the attachment, as in the variety, the precise seat of growth was undetermined; and of course what I shall say in regard to it must be hypothesis, but founded, as I think, on strong presumptive evidence; and for fear of wearying your patience, I will be brief. The most probable seat of attachment was the fundus of the uterus or mesentery, and I am strongly inclined to the belief of attachment in the latter situation; the cyst, from its weight and increasing magnitude, no matter where its attachment may be, would very naturally assume a dependent situation; attached to the mesentery, the result would be pressure upon the fundus of the uterus, forcing that organ either in a backward direction or forward, according to the greater capacity either posteriorly or anteriorly. The greater capacity, therefore, being behind the uterus, was forced backward and downward, fairly wedging the body underneath the sacro-vertebral angle, causing pain, retention of urine and tenesmus of the lower bowel. As further confirma-

tory of this view, the cyst in this situation was doubtless brought in direct contact with the rectum, and from its weight and pressure produced a fistulous opening communicating with the cyst, thereby affording passage of the contents of the latter, giving rise to the discharge of portions of the fœtal fragments, the opening afterwards probably being closed by an adhesive inflammatory process, gluing up, so to speak, the fistula, preventing extravasation in the surrounding parts. As before stated, there was no undue prominence on either side in the iliac fossa indicating either of these situations as the seat of growth. Had the attachment been in front of the bladder, on the anterior wall of the abdomen, its presence could have been detected, especially under circumstances of such extreme distension of the bladder. Considering these facts, I conclude the mesentery must have been the seat of growth.

At the risk of taxing your patience, I will say a few words on the dangers and consequences of extra-uterine pregnancy, preferring to substitute the language of that distinguished writer, Dr. G. S. Bedford, as it will better subserve the purpose than my own. It is an important question, and embodies some interesting and practical bearings. "This form of gestation may terminate in one of two ways. First, rupture of the cyst; secondly, the death of the fœtus, the sac remaining undisturbed. In very rare instances the mother escapes the usual fatal consequences of the rupture of the cyst, because of the formation of what is known as the secondary sac; but the immediate danger of the rupture is death from hæmorrhage, and fatal results ensue in at least two-thirds of the cases in which rupture takes place. Should, however, the female escape the ordinary consequences of rupture, she incurs the serious peril of peritoneal inflammation caused by the irritation of the fœtus on the serous lining after it has left the cyst. If, however, the cyst be not ruptured, the fœtus may continue to live to the completion of full term, or it may have perished, and still continue to be enclosed in the sac. It therefore results that the fœtus may sojourn in the system of the female, and its

presence give rise to the following conditions: First, it may destroy the life of the mother by inflammation. Second, by the derangements which its pressure and presence may create in the digestive and other functions. Third, by its decomposition and passage from the maternal system through the rectum, vagina, abdomen, bladder, etc. Fourth, it may degenerate into a stony, shriveled mass, and remain for many years in the system without resulting in anything serious." It is, I think, very probable that the latter is true in Mrs R.'s case, the cranial bones, vertebræ, and the two ossa innominata, with perhaps all or a portion of the bones forming the thorax, are enclosed in a secondary sac in a degenerated, stony or hardened mass, protecting her from immediate danger, but which may at some time prove to be a source of serious trouble.

It will be remembered that the aborted fœtus in utero was stated to be about a four months' fœtus, also that the bones of the extra-uterine fœtus, as shown by comparison, indicated the latter to be of the same age. This would clearly convey the idea of a twin conception, could we rid our minds of the time required to bring about decomposition. Without offering any further comment, I will leave the subject open for discussion, hoping to elicit the proper investigations due to such grave subjects, and by an agreeable interchange of ideas, that all may be naturally benefited. It will be seen that no special plan of treatment was adopted—therapeutical and mechanical agents being employed to meet the indications—the supporting and anodyne treatment being mostly pursued.

PROCEEDINGS OF SOCIETIES.

"Etsi non prosunt singula, juncta juvant."

Central Kentucky Medical Association.

The Association met at Danville on January 20, in the Odd Fellows' Hall, at the usual hour. The President being absent,

the Vice-President, Dr. Price, took the chair. Present—Drs. McMurtry, Meyer, Tucker, Alcorn, Huffman, W. A. Brown, Shannon, Harlan, Chas. H. Spilman, H. Brown, Cowan, McKee, Dunlap, and Erwin.

The appointee, Dr. Lapsley, of Mercer, being absent, the Chair called on Dr. Spilman to open the debate on the question for to-day—Acute Pneumonia.

Dr. Spilman, after some remarks expressing his surprise at being called on to open the debate, and his total want of preparation to discuss the subject, particularly as to a detail of the morbid anatomy, and that succession of structural changes which occur during the progress of the disease through its different stages, said, whether acute pneumonia is a cyclical disease, and belongs especially to that class called "self-limited," is a mooted point. That a case occurring in a healthy constitution, of medium intensity, will spontaneously recover under the laws of recuperation, in a given length of time, without the intervention of art, is admitted; but that it is impracticable to arrest the inflammation by active treatment—a law which governs "self-limited" disease—is plainly contraindicated by facts.

Pathologists have described pneumonia as an inflammatory affection, distinguished by three several stages: 1st. The stage of irritation, congestion, or engorgement; 2d. Stage of hepatization; 3d. Stage of purulent infiltration. In the first stage, the respiratory function is impaired, but not destroyed, the pneumonic portion being still permeable. In the second stage, or consolidated lung, the air is entirely excluded by the effused coägulated fibrin which now fills the vesicles and involved bronchi. The parenchymatous structure of the lungs has commonly been considered the seat of inflammation. It should be, perhaps, more proper to say, that the extreme capillary system of vessels, both venous and arterial, is the seat of inflammatory action. These are the instruments of both healthy and morbid action.

If we consider a simple case of pneumonia—and its complications do not belong legitimately to this discussion—we

find it usually ushered in by a rigor, followed by a reactive fever of a temperature ranging from 100° to 105°, with all those pains and aches of the head, back, loins, and limbs, which attend an ordinary attack of idiopathic fever. Sometimes it is a day or two prior to the development of the local symptoms, leading occasionally to a mistaken diagnosis. Increasing thirst, accelerated pulse, hurried respiration, coated tongue, loss of appetite, and insomnia are symptoms common to fever. Soon, however, the dyspnœa and rapid breathing are out of proportion to the general excitement, and are found to depend more upon a loss of breathing surface than upon an augmented pulse wave. Pain is now felt in the pneumonic portion of the lung, sometimes keen and sharp, when the pleura is involved, but often a dull, heavy aching. Great prostration and muscular debility are experienced from the onset of the disease. The most distinguishing feature of pneumonia, is the impaired respiratory function. The lungs are so crippled that an average normal breathing of eighteen is increased in frequency to forty, fifty, and sometimes sixty to the minute. This augmented frequency arises, perhaps, from two causes: First, the slowness and difficulty with which the blood is vitalized in that dyscrasia which attends the fever, but chiefly from a loss of breathing surface when the increased inspirations are compensative. The respiration in pneumonia is probably the most valuable symptom, whether reviewed in a diagnostic or prognostic aspect. The gravity of the case, *ceteris paribus*, is in proportion to the frequency of inspirations.

In regard to the exciting *causes* of pneumonia, he said, he would not dwell. Cold is usually assigned as the cause, and it is, perhaps, the most prolific source. It often prevails as an epidemic, depending upon some peculiar state of the atmosphere, the nature of which is not known. This epidemic state of the atmosphere may act as a predisposing cause, producing a general susceptibility to the disease, which is the more readily developed by sudden vicissitudes of temperature.

In regard to the therapeutics of pneumonia, he said that he

was about entering upon controverted ground, and that some of his views are in conflict with much of the current literature of the Profession.

Blood-letting, both general and local, he suggested as the first remedy which demands the attention of the practitioner. Every intelligent physician, he said, ought to know that in every sudden inflammatory attack the seeming debility of the patient is a delusion, that a radical distinction should be kept up between depressed vital action, from the weight of disease, and exhausted life-power. He ought also to know that loss of blood under such circumstances is not only not a debilitating remedy, but imparts sensible strength by taking off the weight of disease; that if practiced with skill and judgment, no other one remedy places the vital forces in a condition so favorable for a development of the law of recuperation, and when drawn, not by weight or measure, but for a given effect, it often cuts short the disease, abbreviates the cycle, and Nature completes the cure with but little aid from other remedies.

The period, however, in which it should be employed to insure success, is at the outset of the disease. Whether it should be resorted to after the second stage has supervened, is a question for the hour, and altogether relative.

Various substitutes for the lancet, to control vascular excitement, have been employed; such as tartrate antimony, veratrum viride, digitalis, etc. Each has its advocates, and they are all valuable in their place. In cases where general bleeding is not admissible, which, he said, we occasionally meet with, the same indications, though in a feeble degree, may be met by these sedative remedies.

Mercury and opium in combination fulfill such important indications in pneumonia, that he thought them second only to the lancet. When given, he said, in combination, premised by free depletion, their antiphlogistic powers are marked, even in the first stage. After the first bleeding, awaken free biliary secretion by a full dose of calomel and Dover's powder; for when you deplete the liver you deplete the lungs through con-

tiguity. But it is in the second and third stages that the power of this remedy is most conspicious. If recovery takes place in a hepatized lung, the effused pneumonic infiltration is resolved, liquefied and eliminated, partly by absorption, and partly by expectoration, and the highly alterative and sorbefacient properties of this agent render it peculiarly appropriate at this stage of the disease. The objection to calomel, on the assured ground that it produces a dyscrasia of the blood and aggravates the disease, is a myth (and he challenged the objector to cite one single physiological, pathological, or therapeutical fact in support of it); on the contrary, there is nothing at this stage so well calculated to break up that *crassamentum* of the blood which gives rise to pneumonic infiltrations.

As rest is important for the lungs, as for all other inflamed parts, opium is added to ease pain, allay nervous irritation, and quiet cough. In the latter stage of the disease its efficiency is more marked when given in small doses, repeated at short intervals. Given in this way, it sometimes effects resolution and recovery, even in the last stage of pneumonia.

Quinine he regarded as a valuable remedy in a given proportion of cases, and in a subject when anæmia is marked, iron should accompany it. It should also be observed, he said, in many localities, and ours furnishes no exception to this observation, pneumonia is seldom met with in the simple form. It is usually found complicated with a fever, from some malarial influence, which, perhaps, serves as a predisposing cause, investing the case with subordinate indications. Here the quinine in full antiperiodic doses constitutes an indispensable part of our treatment.

When hepatization has occurred before the physician is called in, or when the period of engorgement has been frittered away by a morbid timidity on his part, until the air-vesicles are stuffed with fibrin, and the breathing imperfectly performed through successive days, the aspect of the case is now so changed, that we may have to grapple all those symptoms depending on adynamia. The indications, he said, are now the

opposite of what they have been, and we often find it necessary to employ stimulants freely—ammonia and even alcohol—to increase the pulse wave, and prevent collateral œdema, which is usually the cause of death in fatal cases. The indication now is to keep alive the taper as long as possible, and the vigilant, faithful physician is sometimes rewarded, even at this late period, with success.

Dr. McMurtry said the subject was of such extent and importance that he scarcely knew what portion to select for consideration in the space of time allotted him. He regretted that the Chair had not called on him later in the discussion, since there were so many members present with greater ability and more extensive experience.

Since the clinical history of this disease has been so clearly and forcibly delineated by the speaker who had just preceded him, he would confine his remarks, for the most part, to a review of the pathology of the disease, as all rational treatment varies with and is dependent upon the views entertained on the division of the subject.

Acute pneumonia he would define as an acute inflammation of the entire substance of the lung—the vesicular structure, bronchioles, blood vessels, connective tissue, and pleural covering, with probably an unknown dyscrasia predisposing to such inflammation.

The introductory chill, the pyrexia, the intercostal pain, the dyspnœa, and nervous disturbance, all are the results of inflammatory action in such vital parts, involving a plexus of blood vessels so important.

A consideration of the pathology of this disease not only furnishes the safest guide to treatment, but upon the morbid anatomy depends for existence the physical signs, which are the most valuable aids to diagnosis and prognosis. The speaker just preceding him, he said, had very clearly described three stages of the disease. These stages are simply those of inflammation—being in order, congestion, exudation, and resolution or suppuration; fortunately, inflammation here less frequently

terminates in suppuration than when seated upon other mucous surfaces.

During the first stage, the affected portion of lung is in a state of active congestion. The part is heavier than in the normal state, and the percussion resonance is somewhat impaired. The secretion of the vesicular mucous membrane is more viscid than in health, and gives rise to the characteristic crepitant räle. This stage is quickly followed by the second, that of exudation or hepatization. In this stage the air cells are filled with a coägulating material, which converts the vesicular ærial space into a solid structure. The acoustic properties of the lung are altered in consequence, the resonant percussion of the healthy lung filled with air being replaced by a flat sound. The solid lung being a more ready conductor of sound, the tubular sound of the bronchioles replaces the vesicular murmur. This portion of lung performs its function no longer, and by rapid breathing an effort is made to compensate for the reduction in the extent of ærating surface.

The second stage, he said, usually terminates in resolution, the effused material being absorbed; but occasionally the third stage is one of purulent infiltration or gangrene. During the stage of resolution the effused material is taken up by the blood vessels, the circulation in the inflamed lung now becomes active again. The air again entering the lung, resonance on percussion returns, and the fine crepitation announces that the remnant of the effusion is being absorbed. As the function of the lungs is restored, the dyspnœa, cough, fever, and nervous disturbance disappear. Usually the recovery is complete, but in some instances a remnant of the effusion remains unabsorbed, leaving a portion of the lung solidified after inflammation has subsided. This portion of lung may remain in a state of solidification indefinitely, or degeneration occurring then, phthisis may be the termination.

Inasmuch, he said, as fever accompanies this morbid process, and the invasion of any new portion of the lung is announced by a corresponding rise of temperature, the thermometer

becomes of incalculable value in the diagnosis, prognosis, and treatment of the disease. In fact, the disease, he said, could, in most every case, be traced through the stages, as well as recognized, by the thermic curves upon a clinical chart.

With this review of the pathology of the disease, it would be evident, that the course of the malady is that of inflammation. It is clear, then, that the treatment depends upon our views as to the nature and character of inflammation.

He would be compelled, he said, to dissent from the opinion so lucidly expressed by the learned and experienced member who had first spoken upon the subject, that the disease could be cut short by venæsection. He did not believe that an inflammation once established could be aborted. He thought one of the greatest triumphs, as well as one of the most valuable lessons of modern medicine, was perfected when physicians exhibited such courage as to stand by and learn the *natural history* of the disease. It has been demonstrated, he thought, that this disease is self-limited, that inflammation will run its course, and that the natural tendency of pneumonia is to recovery. In fact, every stroke, he said, to cut off the disease while our patient is struggling with it, only recoils upon the patient and renders him less adequate for the contest. Our means of treatment should be directed towards husbanding the patient's strength, and giving him every possible aid and support, remembering that the disease is self-limited, and tends to recovery.

Dr. Cowan said he had obtained for himself satisfactory evidence of the value of local abstraction of blood in pulmonary disease—pneumonia and pleurisy. He had never ventured on general blood-letting, but he was not prepared to discredit the statement of those who did. Doubtless, he said, there is truth in the statement of both of those who pursue the antiphlogistic methods and the expectant plan of Nihilism. The indiscriminate generalization made, however, by the advocates on both sides created confusion and error in the recorded statistics of both, and hence, he thought, had arisen so much difference of opinion about the treatment of pneumonitis.

Dr. Huffman, after referring to some of the features of the pathology and symptoms of pneumonia, said that, in the majority of cases of acute pneumonia, the rational symptoms are so highly distinctive, that the diagnosis may be readily made out without the aid of physical signs. He did not believe that venæsection, when the inflammation is once established, would abort it. Pneumonia, he said, is a self-limited disease, and all treatment should tend to favor the natural progress of the disease. Calomel and venæsection, in his opinion, tended to retard the convalescence, if not to hasten a fatal termination. Statistics, he thought, had proven clearly that the most successful method of treatment in this disease was the expectant plan, nourishing diet, stimulants, and such remedies as will favor the natural course of the disease. The chest should be enveloped in flannel, then with oiled silk, and again with flannel, to promote diaphoresis, supplemented with hot pediluvia, and, if indicated, a saline cathartic. Half-ounce doses of liq. ammoniæ acetatis may be given every three or four hours, and if the febrile excitement is high, two or three drops of tinct. aconiti rad. may be added to the solution. The nervous irritability may be allayed with an opiate—preferably—Dover's powder.

Dr. McKee had nothing to add to the views expressed by the member preceding him as to the diagnosis and pathology of pneumonia. After alluding to the fashions in treating diseases and the treatment of the disease under consideration in former times, he said, every one should be governed by his own judgment, regardless of theories. Pneumonia, he said, is a very fatal disease in the aged, but the mortality is very much less among the young and in adult life. Quinine he regarded as a very valuable remedy in pneumonia, and in the beginning of a case he would give a dose of calomel. As for the statistics of pneumonia, he said, he had no faith whatever in them. His own individual experience in the disease, he added, was worth more to him than all the statistics ever collected.

Dr. Dunlap could not endorse Dr. McKee's statement concerning statistics. It would not do, he said, to discard statis-

tics. They teach us valuable and important lessons. A large number of cases of pneumonia get well any way, and there are some cases in which very little can be done. In acute pneumonia, even in the second stage, much benefit may be had from blistering, calomel, and tartar emetic. The stage of engorgement could be lessened in violence, if not cut short. Much, he said, depends on the habits and early life of the patient. Quinine he considered a good remedy in pneumonia, not to arrest inflammation, however, but to combat malaria. Controlling the circulation, he said, did not cure the disease. In an epidemic of pneumonia, he had used local bleeding with success, accompanied by an occasional dose of calomel. He doubted, however, the propriety of giving much calomel in the treatment, and he disapproved of saline cathartics. The patient, he said, should have a constant supply of fresh air.

Dr. Spilman closed the discussion with a few additional remarks.

Dr. S. L. S. Smith, U. S. A., Chairman of Section on the Progress of Materia Medica, Therapeutics, Hygiene, and Chemistry—postponed from the last meeting—being absent, was discharged from further duty on this Section.

Dr. McKee, Chairman of the Section on the Progress of Midwifery, Gynæcology, and Diseases of Children, failed to make a report, and was discharged.

Dr. Tucker read a report of a case of the contracting form of Bright's disease. The patient, a white male, aged fifty-seven, first applied to Dr. T. for treatment in November, 1869, "suffering from cough, vomiting, some swelling in the eyelids, and amblyopia." After a thorough examination of the lungs, urine, etc., the diagnosis was made out to be the contracting form of Bright's disease. The patient improved some under treatment for several months, but began then to grow gradually worse. The urine at times contained a large amount of albumen, numerous epithelial cells, and tube casts; at other times, they were absent. In October, 1870, Dr. Dunlap was called in consultation, and he confirmed the diagnosis. In November

following, Dr. E. S. Gaillard, of Louisville, was summoned to see the patient with Drs. T. and D. Examination revealed the fact that he had hydrops pericardii, and it was determined to use Dieulafoy's aspirator to draw off the water. Dr. Tucker, with the coöperation of Professor Gaillard, performed the operation in presence of Drs. Pawling, Jackson, Dunlap, McKee, and Erwin. No anæsthetics were used. About two and a half ounces of clear, straw-colored liquid were drawn off. The relief was prompt and marked. The patient was able then to lie prone, and breathed without difficulty. He got along very well for a few days, but after that he began to sink, and died on the tenth day after operation. There was no post-mortem.

Dr. Price read a report of a case of foreign body in the air-passages, exhibiting at the same time the specimen—a cedar-twig one and a quarter inches long, which had remained embedded in the right bronchus for 2 years, 3 months, and 16 days. The patient a girl; white; four years old at the time of the accident, swallowed it whilst playing with some cedar tops, when it passed into the right bronchial tube, which was followed by continual pain and soreness in that region, and severe and distressing cough up to the time of its removal. The breath became fetid, the odor at this time filling the room. The expectoration at this time was sanguinolent, sometimes muco-purulent, the latter very noisome. Her health gradually gave way, and very rapidly some two months before the removal of the twig. She was now confined to her bed, and looked as if she were in the last stages of phthisis. Early in February, 1873, she began to vomit a great deal, and a few days after (6th) during a violent fit of coughing threw up the cedar twig, encased in a tough, muco-purulent secretion. There was some bloody expectoration for several days, but the symptoms soon abated, and she was restored to health.

Dr. McMurtry exhibited a variety of new remedies, appliances, thermometers, hypodermic syringes, etc., and for Dr. Nelson a Gaiffe's pocket electrical apparatus.

Dr. Harlan exhibited two uterine moles, in one of which the fœtus and attachments were displayed.

Dr. Tucker exhibited a number of new books.

The following officers were elected for the ensuing term: President, Dr. R. W. Dunlap, Danville; Vice-President, Ed. Alcorn, Hustonville; Corresponding Secretary, Steele Bailey, Stanford; Treasurer, A. D. Price, Harrodsburg.

The thanks of the Association were unanimously voted the Boyle County Medical Society for an elegant dinner, and other hospitalities, and to the Odd Fellows for the use of their Hall.

The Association then adjourned, to meet at Lancaster on the third Wednesday in April next, when the debate will be opened by Dr. A. B. Nelson, of Danville, on the Physiological and Therapeutical Action of Electricity.

GEORGE T. ERWIN, Permanent Sec'y.

ORIGINAL CORRESPONDENCE.

"Sit mihi Fas scribere audita."

NEW YORK, February 9, 1875.

Dr. E. S. Gaillard:

Dear Sir,—I will again offer a short letter for your Journal. Dr. Hamilton stated in his clinic that he was now satisfied after a long experience that, in compound dislocations at the ankle-joint, resection or amputation should be resorted to. He remarked that he had treated two or three cases successfully with the plaster of Paris dressing. But his experience was very decided that recoveries without resection or amputation were exceptional, therefore, as a rule, one or two inches of the tibia should be exsected. He exhibited a patient with this dislocation which had been treated with a plaster of Paris dressing. Gangrene was commencing, and the patient's condition very unfavorable. Dr. Hamilton removed about one and a half inches of the tibia. Two weeks after the operation the patient was much improved, and the indications are that the limb will be saved.

There are other surgeons connected with Bellevue Hospital who treat compound dislocations at the ankle-joint with plaster of Paris, and they teach that resection or amputation, as a rule, is not called for. Experience of Confederate surgeons in our own late war, as I am informed, was in favor of Dr. Hamilton's views as to the proper treatment of this injury. Excision of bones as a substitute for amputation in some cases has gained favor with New York surgeons during the past few years; they were, however, rather slow to give the conservative operation of excision of bones its merited place in practice.

In Bellevue Hospital, fractures of the thigh and leg are generally treated with a plaster of Paris dressing, though there are some conspicuous exceptions who rely upon Gurdon Buck's extension in fracture of the femur, and the sole-leather and other kind of splints for fracture of the leg. The paper-bandage dressing, which is favorably regarded by some surgeons in Louisville and the South, has never been used here. A distinguished visiting surgeon to Bellevue Hospital asked me if I had ever tried this dressing; he remarked that it had never been used in New York within his knowledge. The plaster of Paris is used by some practitioners in this place in the treatment of Potts' disease. Two layers of the plaster applied, and made to encircle the body from the trochanters to the axillary spaces, with three or four narrow pieces of sheet-zinc interposed between the layers of plaster parallel with the body.

I am assured by Dr. Bryan (who is from near Lexington, Ky.) one of the House-Surgeons of Bellevue, that this has proved an excellent dressing in the treatment of that formidable disease. Its cheapness recommends it, as Potts' disease often occurs among the poorer class, who are unable to purchase the costly apparatus that has heretofore been in general use. When hip-joint disease has advanced to the condition of caries or necrosis, surgeons here, without any exception, promptly excise the head of the femur, and if the disease involves the acetabulum the caries or necrosed portion are scooped out. I have witnessed this operation twice in the past few days.

by Drs. Sands and Sayre. Dr. Sayre shows some splendid results from this mode of treatment; he contends that the morbid condition of the hip-joint disease, as well as Potts', is produced from local trouble not in the least dependent upon constitutional vice.

Very great progress is being made in orthopœdic surgery. Many of the worst deformities are now amenable to treatment.

Dr. Peasley is teaching that there is no such condition as chronic inflammation. What is termed chronic inflammation of the cavity of the cervix and body of the uterus, is only congestion!! Dr. P. states that he has devoted many years to the study of this subject, and is now satisfied that his present teachings are correct. He possesses great courage in endeavoring to so radically overthrow the pathology of the present day, the teachings of which are headed by those distinguished and honored men, Virchow, Beale, and Paget. It is rumored that Professor Peasley is preparing a book on diseases of women, therefore he must foreshadow some eccentric views to make the work popular and sought after.

What formerly was considered general surgery is now divided into several departments or specialties; for instance, in diseased joints and deformities, patients will go to Sayre and others; for the eye and ear, to Agnew, Noyes, and Knapp; and to have a stone cut out or crushed, to Van Buren and Gouley; and so on. The people of New York seem, in their patronage, to have fallen into the channel of specialties, recognizing it as a move in the right direction. It certainly has done much to advance medical science, and thereby bestow additional blessings on society. New York can boast of a body of first-class surgeons. No one can doubt their courage after witnessing their operations for a few weeks. It might well be remarked of them, as Macbeth said to Banquo's ghost, "What man dare, I dare."

Yours Respectfully,

JOSEPH W. THOMPSON, M. D.

SMITHVILLE, BRUNSWICK, Co., N. C., Feb., 1875.

Dr. E. S. Gaillard:

Dear Sir,—I desire to call attention to some remarkable transmissions of accidental marks to offspring.

Mr. R., a Methodist minister and school-teacher of this place, called my attention a short time since to a deep blue mark at the root of the nose of one of his little sons, aged five years, and remarked that every one of his children—eight in number—had the same mark at birth, which continued well defined until about the age of six years, when it became more indistinct till about seven, when no trace of the mark remained.

Mr. R. has always been healthy, and entirely clear of all blood contamination; is now forty-six years old, and the mark, a deep blue black one (if I may be allowed the expression) at the root of his nose, is as distinct now as it was when received at the age of thirteen years, by falling against the edge of a large dinner-pot; no mark before the accident.

Yours truly, F. W. PORTER, M. D.

CHEMICAL AND PHARMACEUTICAL.

"Diruit, ædificat, mutat."—HOR.

Salicylic Acid.—Messrs. Editors,—I inclose, with a request for publication, an extract from a letter just received from Professor Schwartz, of the University of Gratz, giving some account of an important communication made to the recent German Scientific Congress at Breslau, and which will interest the readers of the Journal. E. N. HORSFORD.

Cambridge, Jan. 7, 1875.

"In the chemical section, the most important thing was the exhibition of the salicylic acid now produced in large quantities by the process of Kolbe. It is made from $C_{12}H_6O_2$ and N_2O, HO (phenol sodium), into which is conducted dry car-

bonic acid at a temperature of 170° C. There is formed salicylate of soda, which decomposed by hydrochloric acid precipitates the salicylic acid. This is the best disinfecting agent known. It is without odor, tasteless, not poisonous, and, even in small quantities, absolutely preventing putrefaction. Meat immersed in a solution of salicylic acid, in an open vessel, remained perfectly sweet for weeks. It prevents milk from coägulating. Fruits do not become mouldy, and wounds heal without festering. In the case of a patient whose leg was amputated, the wound was sprinkled with a little powdered salicylic acid, and bandaged for six days without being touched; it was then found to be healed over without the slightest formation of pus.

"It is easy to see what enormous significance attaches to this discovery. The transportation of meat, the preservation of bodies, of anatomical and zoölogical preparations, of fish, mollusca, milk, beer, wine, etc., will be greatly promoted. It must be remembered that salicylic acid is perhaps twice as effective as carbolic acid, and that it is wanting in the poisonous and unpleasant qualities which characterize the carbolic acid. Dr. Fr. v. Heyden has erected, at the suggestion of Professor Kolbe, a manufactory for salicylic acid at Dresden, where one may now obtain the acid at ten thalers per kilogramme (about $3.50 per pound)."*

[It may be well to add that salicylic acid is a constituent of the oil of wintergreen, the checker-berry, *Gaultheria procumbens*, of New England. Its production from carbolic acid (phenol) on a commercial scale, and so from "dead oil," a familiar product of the distillation of coal tar, is one of the triumphs of modern chemistry. It promises so much in practical surgery, in securing healing by first intention, in the prevention of pyæmia, and in the arrest of the growth of all forms of microscopic animal and vegetable life that characterize fermentation and putrefaction, that opportunity for experiment can not be too soon

* Its present price is not far from $3 per ounce.

opened for all. The article can be imported in small quantities through the mail, and in larger quantities through any of the leading druggists.—E. N. H.]—*Boston Med. and Surg. Joural.*

Diuretic Wine of the Hotel Dieu.—Dr. Q. C. Smith desires us to publish the formula for this preparation, which has been found in his hands the most valuable diuretic that he ever used. It is as follows: Recent squill, ½ ounce; digitalis, 1 ounce; juniper berries, 5 ounces; white wine, 6 pints. Macerate for four days and strain, then add 1½ ounces acetate of potash and filter. Dose, a wineglassful three times a day.—*Pac. Med. and Surg. Jour.*

Combination of Iodide of Potassium and Carbonate of Ammonia.—Sir James Paget writes: "I have had extensive experience in the treatment of syphilis with this combination, and have realized the best results. I find that five grains of iodide of potassium combined with three grains of carbonate of ammonia, are equal to eight grains of the potassium salt administered in the ordinary way."—*Ex.*

A Specimen of Nomenclature.—The "Medical and Surgical Reporter" says: "Our chemical readers will doubtless be pleased to learn that a series of acids have been investigated by M. Hayduck. One is orthoamidoeoluenesulphonic acid, and another, diazorthoamidoparatoluenesulphonic acid. A knowledge of these is not indespensable to the practice of medicine. The action of tin and dydrochloric acid on nitrobromacetanilide gives rise to the hydrychloride of ethenylbromophenylenediamine."

To Cement Metal on Glass.—To an intimate mixture of two parts of finely-powdered silver litharge and one pint of white lead, add as much of a mixture of three parts boiled linseed oil and one of copal varnish as will form a doughy mass. It is only necessary to cover the face of the metal with this cement, press it upon the glass, and remove the excess of cement.—*Boston Med. and Surg. Jour.*

MISCELLANEOUS.

"Non omnes eadem mirantur amentque."

Beneficial Effects of Vaccination.—The Registrar-General for Scotland, in his last annual report, makes some observations on vaccination which are important. The beneficial efficacy of vaccination he attests by some striking statistics. He says:

"Before the introduction of vaccination into Scotland, from twelve to fourteen per cent. of the total deaths were annually caused by small-pox, while nearly two per cent. of those who survived its ravages lost their eyesight, and a very large proportion had their countenance disfigured for life. Since vaccination was introduced into Scotland in 1799, the average annual death-rate from small-pox up to the present day has been only one and a half per cent. of the total deaths, and even that number has chiefly been caused by the deaths of persons who never had been vaccinated. This single fact proves of itself more convincingly than any arguments, the saving of human life which the general adoption of vaccination has effected."—*Med. Times and Gaz.*

Subcutaneous Injection of Ergotine in Fibromatous and Myomatous Tumors of the Uterus. — Hildebrandt, in an article on this subject, quotes the experience of Scanzoni, Burow, Hennig, and Keating with his own, which has also been extensive. He concludes that we have the most favorable conditions for the absorption of a fibroma or myoma of the uterus under the ergotin treatment (1) when the growth is firm and elastic, (2) when its seat is submucous, (3) when the uterine walls are healthy, contractile, not thinned by over distension, not rendered rigid by exudations, and when no inflammatory processes are going on in their neighborhood. He finds that the solution of ergotin is most efficient and least likely to set up inflammatory action when it is prepared according to Wernich's directions; he adds a few drops of glycerin to keep it from molding.—*Allg. Med. Cent. Ztg.*

Treatment of Cystic Tumors of the Thyroid Gland.—At a recent clinic at the Hôtel Dieu, at Paris, M. le Dentu presented a case of cystic tumor of the thyroid gland, on which he proposed to operate, but before doing so he gave a very good description of the malady, and pointed out the dangers attending it, whether operated on or not. In referring to the treatment, operative measures, he said, offered the only chance of cure, as medication had been of no avail in stopping the progress of the disease. Punctures with a bistoury, or even with a trocar, he condemned as being dangerous, and even small, repeated punctures are not free from danger, as suppuration may take place, or the blood putrify, and thus endanger pyæma or septicæmia, which almost always end in death. The same objections apply to setons or drainage tubes. Incising the cyst and then filling it with charpie, as practised by Celsus, is also a dangerous proceeding, as it may be followed by hæmorrhage or unhealthy suppuration. Excision, even partially, ought not to be thought of, as being a vascular organ the operation may end in fatal hæmorrhage or phlebitis. Removal of the tumor by caustics will not expose the patient to such danger, and among these he preferred the chloride of zinc, as used by Maissoneuve in the form of darts. Injecting the tumor with irritating substances was the least objectionable form of practice. He did not approve of injections of wine, and gave the preference to the tincture of iodine, in the proportion of one part to three parts of water, as for hydrocele, though in some cases it may be necessary to use it pure, as he had seen it done by Nélaton. This surgeon sometimes added iodide of potassium to iodine; sometimes to saturation, for injecting tumors of this sort.—*Irish Hospital Gazette.*

The Recapitulation Hypothesis.—Mr. E. R. Lankester recently read a paper before the British Association—Department of Zoölogy and Botany—in which he referred to what has been called the recapitulation hypothesis, according to which all living things in their development present a rapid series of pic-

tures, or dissolving views, of their ancestors, arranged in historical order. Applying this to the human race, he said that the earliest commencement of a human being was a small speck of protoplasm of mucus-like consistency, such as existed in ponds. A later stage exhibited him as a small sac, composed of layers of living corpuscles, which he inherited from polyp-like ancestors, and such as was to-day seen in polyps. Still later he was an elongated creature, with slits in the side of the neck, which, like the gill-slits of the shark, he inherited from a shark-like ancestor. Six months after birth the child continued to inherit qualities from its ancestors, viz., from those which crawled on four legs; and at a later period certain irrepressible tendencies made it clear that qualities were inherited from climbing and shrieking animals!!!—*New York Med. Jour.*

Ergotin in Croupous Pneumonia.—Dr. Wycisk, acting on the principle that this drug contracts the vessels and so prevents exudation from them, has treated six cases of croupous pneumonia in this way, and gives the following report: In one such case, marked by an excessively albuminous expectoration, it ceased entirely two hours after the administration of the drug in powders of nine grains each every quarter of an hour. The abundant râles in both lungs soon diminished, so that there was only a slight crepitation at the original focus of the disease. These good effects lasted for two days. Two relapses occurred, however, but the same good effect was again obtained by the administration of the ergot. After the second relapse, ten drop-doses of the tincture of ergot were given four times daily, until convalescence was fully established. In the five other cases, the ergot was used early, and none ended fatally, none became chronic, and none left appreciable deposits behind them; in all of them the exudation was decidedly checked by the ergot. It is, however, held to be a dangerous remedy when the lungs are considerably infiltrated, where there is emphysema, where the cerebral arteries are weak, and where the patients are feeble or decrepid.—*All. Med. Cen. Ztg.*

A Peep into a Prima Donna's Throat.—Dr. Fieber of Vienna, like the little boy that cut open his drum to see where the music came from, has been looking into the throat of Madame Pauline Lucca, and publishes the results of his scrutiny. The mechanical apparatus to which the melody is due appears in her case to be beautifully perfect, owing doubtless partly to natural endowment and partly to scientific training which she had in early youth. Examined under the laryngoscope, the larynx appears small and well shaped, its parts being marvellously developed and perfect. The true strings are pure snow-white, and possess none of the bluish tinge common among women. Although shorter than usual among vocalists, they are stronger in proportion, and amply provided with muscle. When at rest they are partially screened by the false strings; but Dr. Fieber, who watched Madame Lucca's throat through his instrument whilst she was singing, noticed that as soon as a tone was struck, they displayed themselves in their full breadth and strength. The aid given by a suitable form of mouth to the production of vocal music is a novel and interesting point brought out by Dr. Fieber. On being admitted to a view of the artist's mouth, he was at once struck with the spaciousness and symmetry of its hollow, as well as the vigor with which every tone raised the "sail" of the palate. He is of opinion that the natural conformation of her mouth accounts in a large measure for the wonderful power she possesses of raising and dropping her voice alternately. The sound-waves are naturally strengthened in a space so favorably-shaped, while the muscles of the palate appear to have acquired exceptional strength and pliability from long practice.—*Ex.*

Experimental Production of Giant-Cells.—The "Medical Times and Gazette" gives a summary of Dr. Ernest Ziegler's experiments regarding the growth of connective tissue during inflammation. He cements by the corners two little squares of glass, leaving a free capillary space between the plates. These are inserted under the skin or periosteum, or in the

large serous cavities, of dogs. Dr. Ziegler has thus caused the blood corpuscles to migrate into the glass cells, where they undergo important changes, the most interesting of which is the formation of a reticulated tissue in which epithelioid cells are imbedded, and in which an abundant development of giant-cells takes place. These giant-cells are composed of finely granular protoplasm. He has also observed the formation of connective tissue and blood-vessels from the white corpuscles.

Pitting from Small-Pox.—Although Prof. Hebra so emphatically disclaims any belief in the efficacy of external applications against pitting, he nevertheless employs them in his practice at the present time; but he employs them solely with a view either to facilitate the early evacuation of the pustule, and thereby anticipate purulent resorption and pyæmic consequences, or to ameliorate the subjective symptoms of discomfort which a patient experiences during an eruption of smallpox. He considers that the secondary fever of smallpox, which usually begins on the seventh and reaches its height on the eleventh day of the sickness, is caused by a resorption of the decomposing contents of the pustules, and hence he terms it a pyæmic fever. To prevent this casualty, he recommends the early evacuation of the pustules. But direct opening of the pustules by puncture or caustic is painful and dangerous to the patient, and is inapplicable to confluent forms of the disease. Having observed that the efflorescences upon mucous membranes never attain the same development and purulency as those on the skin, he attributes it to the fact that the mucous membranes are constantly macerated by their own secretions, and thereby the pustules become more readily emptied of their contents. Acting upon this hint, he accordingly applies simple macerating agents, such as wet cloths, ointments, etc., to the surface of the body.—*Boston Med. and Surg. Jour.*

Mackay's omphalic mustard plasters or leaflets consist of disks about the size of a sixpence, attached to small sheets of

a light and transparent material. These are four and a half inches by three and a half, and have each twenty spots. They are merely to be dipped in water and applied. By leaving them on for a longer or shorter time, any required amount of effect may be attained, from a glow of redness to actual blistering. The spot principle, too, seems quite in accordance with nature's own efforts to relieve internal congestion and inflammation, as in the various rashes which from time to time appear on the body. It is well known that the appearance of such is attended with much relief from suffering. The same principle has been applied to fly-blisters. The spots are of three sizes, but those most recommended are small—four-tenths of an inch—and eighty-five of them on a sheet six inches square. They occasion a crop of vesicles, which appear in regular order, having intervals of unblistered skin between. What renders common blisters so painful is the denudation of a large continuous surface of the sensitive skin. The spot plan entirely does away with this, leaving as it does sound intervals between the vesicles, and making it an easy matter to heal them up when this is wished for. By removing the cuticle and applying a drawing ointment, the counter-irritant effect is kept up, and may be intensified as much as is deemed desirable.—*Ex.*

Treatment of Hooping-cough. — Wilde claims that he can cure every case of hooping-cough within eight days by the following treatment: The patient is not to leave the room, and at every access of coughing is to hold before his mouth a small piece of cloth, folded several times, and wet with a teaspoonful of the following solution: ether, 60 parts; chloroform, 30 parts; turpentine, 10 parts.—*Deutsches Archiv. f. Klin Med., All. Wien. Med. Ztg.*

Allgemeines Krankenhaus, Vienna—Clinic of Praf. Karl Braun—Cauliflower Excrescence—Portion of Peritoneum Removed.—The patient we introduce to you to-day is a married woman, aged thirty-three, and has borne two children. Her physical appearance is good, and no one would imagine, judg-

ing from it, that she was suffering from any serious cachexia. Yet she is laboring under a difficulty which, if not promptly met and treated, will beyond a doubt be fatal in its results.

She tells us that for a period of five months she has been constantly losing blood, not in great quantity, it is true, yet there has been a steady drain upon her system, which threatens sooner or later to undermine her strength; and it is our purpose to-day to make an examination of the trouble, and to do something for its removal.

A vaginal examination reveals, situated upon the anterior lip of the cervix more especially, yet extending nearly the entire distance around it, a new growth, which we have no hesitation in pronouncing, from the peculiar sensation it imparts to the fingers, the hæmorrhage which accompanies it, and the entire history of the case, to be an instance of the so-called "cauliflower excrescence."

What, in such a case, should be our treatment? Experience has conclusively proven that nothing short of its radical removal will be of any value. Any attempt short of this will result in a failure, and the condition of the patient subsequently will be even worse than at present. Here it is always better to cut away too much tissue than not enough. A portion of the peritoneum may be removed, proper care being taken in the subsequent treatment, and yet no injury result. In the very many cases here operated upon in the past twenty years, but a very small percentage has been lost, while in many of these the peritoneum has been cut. I operate every year fifteen or twenty times for this difficulty, and often remove a portion of the peritoneum so large that my assistants scratch their heads and say, "He has gone too far this time"; but as they grow older and see these operations again and again repeated with most favorable results, they learn better. The surgeon would object to such an operation, involving the opening of the peritoneal sac, but the gynæcologist, who operates in this region much oftener, knows better what can be done.

As to the instruments used in this operation, I have little at

present to say. The operator will be guided by the conditions of the case, or, it may be, by taste, in choosing them. I prefer in these cases the use of the galvano-caustic to all other means, and place the wire so that it shall pass through *perfectly healthy* tissue.

[The operation was here performed, and a large portion of the cervix amputated, the wire passing completely behind the growth, which was about as large as a hulled walnut, removing a portion of Douglas' cul-de-sac.]

You will observe, gentlemen, as this specimen passes around the class, that I have removed quite a considerable portion of peritoneum. It is better to avoid doing this, if possible. I do not think this case required it, and had not intended to touch it, but the folds of the posterior wall of the vagina deceived me. Our subsequent treatment will be very simple. We will use a glycerin tampon, taking care not to introduce it so far that there would be danger of its passing into the abdominal cavity; and no injection whatever will be allowed. The patient will be required to lie as much as possible on her back, the severed tissues being thus thrown more nearly into accurate juxtaposition, and the healing process will be proportionately more rapid.

November 14.—Patient doing very well. There has been no rise in temperature since the operation.—*Philadelphia Med. Times.*

Aspiration in Pleurisy.—The question as to the pneumatic aspirator in pleurisy has of late been discussed by Dr. Becker, of Munich. In cases where the operation is one of necessity for the preservation of life, there can, of course, be no question as to its propriety; but in most cases of pleurisy with serofibrinous effusion, Dr. Becker is decidedly opposed to aspiration of the fluid. Even where the pleural cavity is so full that the heart is much displaced, as long as the respiration and circulation are not disturbed he would leave the cure to nature. He contends that when the fluid has reached a certain amount

effusion ceases, and the current setting in an opposite direction, towards the vessels, the cavity is gradually emptied, and contraction and adhesion occur in due order. Nature spontaneously limits the amount of effusion by compressing the root of the collapsed lung, and thus so far arresting the circulation in the vessels of supply. If the physician interferes with the normal course of affairs, and removes the fiuid before the pressure in the pleural cavity has reached a certain height, he will simply restore the circulation in the pulmonary vessels, reëstablish the conditions of effusion, and bring the rough surfaces of the pleura into frictional contact, and have robbed the system of so much precious fluid.

Dr. Becker considers the circumstance even more serious when the collapsed lung is adherent. Should aspiration then be performed the fluid speedily refuses to flow, the tube collapses, and air forces its way around the needle into the chest. Worse still, the lung expanding unequally may undergo alveolar dilation; it becomes hyperæmic, hæmoptysis may occur at once, and bronchitis and pneumonia supervene. Less serious reasons for letting nature alone in sero-fibrinous pleurisy without urgent symptoms are the facts that the risk of sudden death from fatty heart, which is present in such cases, is not removed by operation; that marasmus is not relieved by it; and that fresh pleurisy often comes on, and the chances of empyæma increase with every tapping!!!—*Ex.*

The Contents of Seminal Cysts.—Cazeneuve and Duremberg have recently examined three Seminal cysts and report that the spermatozoa which were found in the fluid after filtration exhibit active movements for more than twelve hours after removal from the cysts. The fluid had a weak alkaline reäction, and contained a considerable quantity of common salt, only slight traces of which are present in the normal fluid of the seminal vesicles. On the other hand, the phosphates were wholly wanting, while they are commonly present.—*Allg. Wien. Med. Ztg.*

Scarlet Fever Preserves.—The London "Practitioner" calls attention to the prevalence of scarlet fever at present existing in Great Britain. To such an extent has it increased that the title of "English Plague" has been justly applied to it. During the twenty-one years 1851–71 it killed on an average 18,400 persons yearly. It is found, as would be supposed, that the districts of excessive mortality were those containing the great urban populations. The whole of the districts of continuous mortality during the twenty-one years 1851–71, regarded topographically, do not appear to exceed thirty-one in number. These districts contain an aggregate population of about 11,000,000—that is to say half the population of England.

In these districts the infection is never absent; a continuous succession is maintained there from month to month and from year to year. During its epidemic developments it readily spreads beyond these limits and infects other districts, which in ordinary times are free from disease. These districts may then be looked upon in the light of preserves. It is of the utmost importance, under these circumstances, that proper measures should be taken to suppress the disease in these centres. We are somewhat surprised to learn that little has been done in this direction, and that in London alone provision is being made for the isolated hospitals of scarlet fever cases, and for the disinfection of infected premises.—*Bost. Med. and Surg. Jour.*

New Method of Ascertaining Death.—Dr. Monteverdi, of Cremona ("Philadelphia Medical Times"), has proposed a simple, easy, and certain method of deciding whether a person is really dead. He injects a drop or two of ammonia beneath the skin. If the person be dead, no effect, or next to none, is produced; but if the person be alive, a red color appears at the point of the injection. He has published a pamphlet on the subject, illustrated with six plates; and the plan, simple as it is, seems likely to be useful in preventing the possibility of burying alive.—*Ex.*

A Cheap Method of Collecting Medical Journals.—Many individuals scattered over the country east of the Rocky Mountains are already well acquainted with the art of collecting Medical Journals without paying for them—an art very extensively practiced. But for the benefit of persons not so informed, we publish the formula as follows: Get a list of all the journals, and purchase a corresponding number of postal cards. Write to each journal on a card, a request to forward you a specimen copy. You may add, by way of decoy, "with terms of subscription," or "with a view to subscribing." If the proprietors are the fools you take them to be, you will get a copy of every Medical Journal in the United States, free of postage to you, for one cent each. In other words, you will swindle about thirty journalists out of at least a thousand pages of reading matter, at a cost of thirty cents.—*Pac. Med. and Surg. Jour.*

Inflammable Gas found in the Stomach.—Dr. Heynsius relates the case of a man who suffered violent eructations after eating, and on four occasions the gas which was discharged caught fire, burned his lips and nose severely. He had symptoms of acid dyspepsia, with dilatation of the stomach, probably the result of a stricture of the pylorus. The vomited matter was examined, and the gas which it generated was found to consist chiefly of hydrogen and carbonic acid. In the distillate butyric acid was found, and the phenomenon was probably due to butyric acid fermentation, the hydrogen being the cause of inflammability of the ejected gas.—*Irish Hospital Gazette.*

The Growth of Ipecacuanha in India.—According to the "Pharmaceutical Journal," Dr. King, Superintendent of the Calcutta Botanic Gardens, states in a late report that the propagation of the ipecacuanha plant by root and leaf-cuttings has been so successful that there is at present a stock of 63,000 living plants; whereas, four years since, there were at the Cinchona Gardens but twelve cuttings, of which seven were afterward accidentally destroyed.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

"Judex damnatur cum nocens absolvitur."

A TREATISE ON THERAPEUTICS, COMPRISING MATERIA MEDICA AND TOXICOLOGY, with Especial Reference to the Application of the Physiological Action of Drugs to Clinical Medicine. By H. C. WOOD, JR., M. D., Professor of Botany, and Clinical Lecturer on Diseases of the Nervous System in the Medical Department of the University of Pennsylvania, etc., etc. Vol. 1, 8vo., pp. 578. J. B Lippincott & Co., Philadelphia, 1874.

The external appearance of this book is attractive, and its title is comprehensive and full of promise. It is said that prefatory remarks are usually deprecatory remarks; as the French have it "qui s' excuse, s' accuse," but the author does neither the one nor the other, and he may, properly enough, dispense with all excuses for having undertaken a task so timely and important. Dr. Wood recognizes in his preface "the right of every student to demand of an author by what authority he doeth these things, and to challenge every memoir for its *raison d'etre*."

It is the duty of the reviewer to avail himself of this undisputed and indisputable right. It is his province to consider, not only the requirements a book like this is intended to fill, and the wants of the public to whom it is offered, but also the circumstances and position of the author, the opportunities of study he has enjoyed, the sources of observation and research at his disposal. Fortunately, the author himself renders all inquiry into the latter question superfluous, and prevents anything like doubt on the subject. In the preface he informs the reader that "to the performance of this voluntary task he has brought the training, labor and experience of years spent in the laboratory, the class-room, and the hospital ward."

> "It is the witness still of excellency
> To put a strange face on its own perfection."

There are excellent text-books for many branches of medicine, that entirely meet the wants of the student, but not so with

Materia Medica and Therapeutics. Ringer, for instance, deals with Therapeutics only; Biddle and Riley confine themselves closely to Materia Medica, and treat so meagerly and superficially of therapeutics as to be wholly unsatisfactory. Stillé's in many respects is a most excellent work, but its bulkiness and arrangement render it rather unavailable for beginners, besides, it is rather behind the times. Dr. Wood offers to the profession, therapeutics, materia medica, toxicology, all in one work —with special attention to the physiological action of medicines; in fact this is the distinguishing feature of the book He has gathered from numerous sources a vast amount of interesting and important knowledge on this subject; foreign and home journals, memoirs, essays, and even more pretentious publications have been consulted by this industrious compiler, and from them he has gathered together a great deal of valuable matter that is now, for the first time, collected into one volume, and thus rendered easily accessible to the reader. It often happens, however, that several experiments yielding conflicting results, and diametrically opposite conclusions and opinions are huddled together in the same page, and to the confusion of the reader, especially if he be but a beginner; and in many places the author's desire seems to be rather to quote experiments than to elucidate them. He frequently subordinates points in practical therapeutics to display the results of his varied and extensive reading.

The classification adopted in this work is arbitrary, like all previous classifications of the "materia medica," expressing the method of the author, and the side from which he has approached particular points. The different vegetable acids are here, it is believed, for the first time, classed with *cardiac sedatives*, although the author admits they are not used to produce a profound impression upon the circulation. The class *analgesics*, contains only one article, opium; and the next class, *mydriatics*, comprises belladonna, hyosciamus, and stramonium. This may be admissible for the sake of convenience, but implies a rather narrow view of such a drug as belladonna.

Chloral hydrate is classed as a depresso-motor, with physo stigma, conium and lobelia, etc.

At the close of the volume is an appendix containing much valuable matter, viz: Weights and measures of the metrical system, relation of the weights of the U. S. Pharmacopœa to metrical weights; relation of metrical weights to weights of the U. S. Pharmacopœa, etc.

To one who peruses this volume with care, it is evident that the author has been strangely careless for one who has brought to his task the "training and experience of years." Such preparations as wine of antimony, syrup of the iodide of iron, Goulard's Extract, and all, or almost all the officinal suppositories, are not to be found in the places to which they respectively belong, but have been put as an afterthought in the appendix at the close of the book.

The class oxytoxics, includes one article *ergot*, that is well and fully considered, but the reader is surprised that the very name of *gossypium* is omitted. It is true, all that is known relating to this powerful drug, rests upon clinical evidence only, but this is the very reason why one would look for some information as to its physiological action in a book making this the principal point in discussion.

In his eagerness to make it a *scientific work*, Dr. Wood appears to have overlooked the important facts, that *accuracy* and painstaking attention to detail are essential to the scientific character of either a man or a book. He has not exercised due diligence, and certainly has not succeeded in making his book a useful and practical text-book on therapeutics, materia medica and toxicology.

The physiological action, therapeutics, and toxicology of nitrate of silver are properly discussed, and a quarter of a page is devoted to its *administration*, but the author omits to say a word about the dose.

The author maintains the same reserve in regard to hydrocyanic acid; although nearly ten pages are taken up with this medicine, yet the dose of it is not mentioned.

The article on Veratrum Viride sets forth the physiological action of this drug in a very satisfactory manner. Its sedative effect upon the heart and spinal cord, its power to reduce the frequency of the respirations, and to lower the temperature are mentioned, and the author finally admits that it dilates the capillaries; but the *therapeutics* of veratrum is a part of the subject most briefly and hastily passed over. Veratrum viride has been and still is extensively used in the treatment of pneumonia, yet published statistics, showing the percentage of deaths under such treatment, are exceedingly limited. Under such circumstances, it would have been but proper that the author should bring out what little of this kind he had at his command. Although Kieman published 40 cases of pneumonia, of which 5 died, giving a death rate of 12.5; and although Dr. Drasche records 73 cases with very important results, Dr. Wood does not even allude to them.

Aconite, alcohol, opium, and quinine are exceedingly well discussed, and have received very special attention by the author, and it is impossible to read these articles without profit, either in the way of refreshing knowledge already attained, or by acquiring new and valuable information.

The following lines are quoted from Dr. Wood's remarks on the "Therapeutics of Aconite:" "In some cases of *hypertrophy of the heart*, or when the valves being diseased, the hypertrophy is greater than is necessary, aconite is of use to control cardiac excitement." This language from one who considers himself an experienced clinician, strikes the ordinary reader as being rather peculiar. Hypertrophy of the heart is generally admitted to be a compensating change—developed to overcome some defect, either at the valvular orifices or at some more remote point. If this view is correct, Dr. Wood's proposition to counteract a conservative effort of nature by the administration of depressing agents is irrational and the practice injurious.

Flint remarks that "cases of simple uncomplicated hypertrophy of the heart are so rare that its clinical history can hardly

be said to have been established by observation. The symptomatic phenomena which are described as distinctive of it have been determined inferentially, rather than by facts observed in well authenticated cases." This, undoubtedly, is a plain statement of facts; yet Dr. Wood not only meets with such cases at least now and then, but he appears to recognize them with ease, and to treat them with precision. He seems to know exactly how much hypertrophy need exist in any given case in order to be just enough, and to know the exact amount of excess. Now, for the sake of poor suffering humanity, will not the Doctor explain how he "doeth these things?"

The high rank of mercury as a remedial agent, which it has held so long, the great and radical changes in professional opinion relating to it, which of late years have taken place, the extensive labors and important conclusions of the Edinborough Commission, and the great ability and high scientific position of the men composing it, all these combined facts invest this agent with a degree of interest it never before possessed, even when blind and unquestioning belief in its supreme antiphlogistic powers swayed the professional mind. One, therefore, turns with eager curiosity to the pages devoted to mercury, in this the most recent systematic work on Therapeutics in the English language.

The study of the physiological action of medicines is the leading feature of this work. The author places no reliance upon clinical experience as the means of building up a science of therapeutics. He exclaims, "What has clinical therapeutics established permanently and indisputably? Scarcely anything beyond the primary facts that quinine will arrest an intermittent; that salts will purge, and that opium will quiet pain and lull to sleep." . . . . . "Experience is said to be the mother of wisdom. Verily, she has been in medicine rather a blind leader of the blind." . . . . "In spite, then, of Dr. Niemeyer's assertion that experiments made with medicaments upon the lower animals, or upon healthy human beings, have, as yet, been of no direct service to our means of treating disease, and

that a continuation of such experiments gives no prospects of such service in the future, it is certain that in these experiments is the only rational scientific groundwork for the treatment of disease. It has been strenuously objected to, especially to experiments upon animals, that drugs do not act upon the lower creatures in the same manner as they do upon man. When I first commenced the studies, whose outcome is the present volume, I was profoundly impressed with the truth of this oft-repeated assertion, and with the difficulties which it put in the way. To-day, I do not believe that, stated in its broad sense, it is true. Indeed, more strongly I assert that it is not true, that in the vast majority of cases the actions of drugs upon man and upon the lower animals are, though seemingly different, in reality similar; that the more knowledge we acquire, the fewer exceptions remain unexplained; and that the whole matter is, in all probability, subject to laws whose development will greatly aid in our explanation of various obscure clinical phenomena."

In the spirit of these extracts, he studies the action of aconite, belladonna, opium, quinine, hydrocyanic acid, ergot, conium, etc., etc.; but when considering the action of mercury and its therapeutic value and application, he strikes the flag he so proudly waved in his preface.

In regard to the experiments with mercury on dogs, and conclusions drawn therefrom as to the effects of this metal upon man, Dr. Wood remarks: "What is to be drawn from these various facts? Evidently, I think, but one conclusion—that the experimental evidence at present does not warrant any deductions as to the effect of purgatives upon the biliary secretion of healthy dogs. *The canine diet and digestion are so different from the human that it is to be expected that medicines acting upon the digestive apparatus will influence dogs differently from man.*" . . . . "Finally, he sums up "that the only deducible conclusion in regard to *the experimental evidence* that has been brought forward is, *that it must be laid aside when we desire to study the cholagogue action of remedies upon*

man, and that our conclusions must be based solely upon clinical evidence." (!!!!)

In experiments which Dr. Wood relies upon to establish the physiological and therapeutical action of other drugs, lower animals have been used which differ far more widely from man than those he re-declares unfit to establish the action of mercury. One is tempted to ask, do not the heart and the blood of the frog differ far more from the heart and blood of man than the diet and digestive apparatus of the dog differ from those of man? The structure and function of the liver of the dog are the same as in man. Mercury is known to affect the dog as it affects man; a great deal of the knowledge relating to human bile is based upon studies of the bile of the dog. Yet, Dr. Wood holds facts thus acquired to be entirely inapplicable to man.

The author holds it as proven, that "in health mercurials increase the flow of bile from the intestine, as they will sometimes reëstablish it in disease, when secretion has altogether ceased or has been very materially diminished, the conclusion seems to be inevitable that mercurials have the power of directly or indirectly increasing the secretion of bile." But when it is asked what signs indicate inactivity of the liver, the only answer appears to be *clay-colored stools.*

If there be any one so unreasonable as not to be satisfied with this answer, he has only to read on to be enlightened with another specimen of Dr. Wood's pathological lore: "In *catarrhal jaundice,* mercurials, on the whole, offer, I think, the most frequently successful mode of treatment." The pathology set forth in this sentence is as remarkable as the exuberance of its punctuation. It is surprising that a physician in Dr. Wood's position does not yet know that jaundice depends upon obstruction to the flow of bile and its reäbsorption. If mercury increases the secretion of bile, the drug is certainly contra-indicated where the difficulty consists chiefly in obstruction to its flow, and so long as this is not removed, increased secretion can only add to the trouble.

His therapeutics are on a level with his pathology, for he asserts that in jaundice "the main reliance is to be placed in the continuous exhibition of small doses of the drug *until the gums are rendered slightly sore!*"

In view of the above quotations, one is prepared to find that Dr. Wood still believes in the *antiphlogistic* powers of mercury. His conception of inflammation is as antiquated as his notion of the pathology of jaundice. His treatment of dysentery with mercury is in perfect keeping with both. In mentioning the alterative preparations of mercury, their effects and uses, the author directs that the red iodide of mercury be given in the same dose as corrosive sublimate, but very carelessly omits to mention the dose of the latter.

On looking over the pages for an account of gelseminum, a drug in connection with which and the Wharton trial Dr. Wood attained some notoriety, one is disappointed to find it has been entirely omitted.

The work, with all its numerous short-comings, contains a great amount of useful and interestieg material, much of it here for the first time collected in book form. The volume is well worthy a place in the library of every one wishing to keep up with the progress in this branch of science. But unless the author will take the trouble to remodel, and in part re-write his book, it will never attain the position of a recognized text-book.

J. A. O.

MEDICAL NEWS.

'Nulla dies sine linea."

On Diabetes Mellitus.—Among recent German medical works, two of value have appeared on diabetes mellitus. One is by Dr. Ed. Külz ("Beiträge zur Pathologie und Therapie des Diabetes Mellitus," Marburg). He gives a very careful analysis of eleven cases. In practice, he found that the use of

fruit sugar, inulin and mannite, does not increase the sugar in the urine. Hence, he recommends the latter for sweetening tea and coffee, and permits pears and apples. Biscuits of inulin are also allowable. A second work is by Dr. A. von During, of Hamburg ("Ursachen und Heilung des Diabetes Mellitus, Hanover"). He regards the disease as a strictly curable one, and quotes an experience of twenty years for his assertion. He claims no specific means, however, but bases his treatment on an extremely careful regimen, and a rigid observance of ventilation, skin-rubbing, exercise, etc. His book should be bought by any one desiring full information on the subject. ———*Fucus Poultices.*—A new form of poultice has been introduced to the notice of the Profession by M. Lelièvre, a Paris chemist, which is proposed as a substitute for linseed meal. It consists of a substance extracted from the *Fucus crispus*, which can be preserved in sheets like paper. For use, a piece of suitable size is cut and dipped in warm water; it swells rapidly, softens, and can be immediately employed as a poultice. A very favorable report on the substance was presented to the Academy of Medicine by M. Jules Lefort, and MM. Gosselin, Verneuil, and Demarquay, who had used it, praised it highly, claiming for it the advantage that the poultices do not dry, do not slip from the place to which they are applied, have no unpleasant odor, do not soil linen, and can be used over again many times. The substance would thus appear to have a place intermediate between linseed-meal and spongio-piline, and probably would be capable of much more extensive use than the latter, which is difficult to keep accurately applied, and soon becomes cold.—*Lon. Lancet.*———*Latest Cundurango.*—Last fall Dr. Riegel reported six cases of cancer treated with cundurango. According to the "Allgemeine Medicinische Centralzeitung," he found the drug a powerful stomachic, which occasionally benefited the digestion, but was wholly without influence on the progress of disease.———*The* Board of Trinity College, Dublin, have appointed Dr. J. Emerson Reynolds to the University Professorship of Chemistry, vacant by the re-

tirement of Professor Apjohn.—*Lond. Lancet.*———*A* physician in Cincinnati reports a successful operation for vesico-vaginal fistula. The curious part of it is, the patient was his own mother.—*Phil. Med. and Surg. Rep.*———This winter, in Florida, has been very unfavorable to invalids. In December and January there were heavy rains and dense fogs. Early in February a change of 35° took place in twenty-four hours at Palatka.—*Ib.*———*Some* samples of sweetmeats recently examined in the provinces were found to contain in appreciable quantity the poisonous chromate of lead which is used to give the confectionery a yellow color. This may probably be a hitherto unsuspected cause of lead colic.—*Lond. Lancet.*——— *Dr. Frankland* reports that in January the East London Company's water-supply, derived partly from the Lea and partly from the Thames, was, as regards dissolved organic impurity, no better than Thames flood-water. In the Chelsea, Southwark, and Lambeth waters the suspended matter contained moving orgasms, whilst considerable quantities of the mycelium of a fungus were detected.———*Personal.*—Dr. R. A. Kinloch has retired from the editorship of the "Charleston Medical Journal and Review."—Prof. Thierry, of Brussels, having lately been promoted to the grade of officer of the Order of Leopold, received quite an ovation from the students on his first subsequent visit to the Hospital.—Dr. Louis Remy Aubert-Roche, formerly chief medical officer of the Suez Canal Company, during its construction, as an Epidemiologist, died in January in his 65th year.———In the Registrar-General's return of the mortality in England and Wales during the past quarter, the increased fatality of scarlet fever is very clearly seen——— *Origin of Pus.*—A fresh paper in Robin's "Journal de l'Anatomie," by M. Picot, well known as a determined opponent of Cohnheim's, or the emigration theory of the origin of pus, shows that the subject is not yet even quite exhausted. Within the last year or two, several memoirs have been published favoring the view that the cells of pus are white corpuscles. In the first place Axel Key and Wallis have studied the changes that

occur in the cornea when its centre is touched with a point of nitrate of silver, and find that immediately around the eschar a zone forms, in which the nuclei and corpuscles of the cornea become vacuolated, and undergo degenerative changes. At the same time a number of cells resembling the white corpuscles of the blood, and which they believe to be white corpuscles that have escaped from the vessels, appear at the periphery of the cornea, and make their way, by virtue of their amœboid movements, to the injured part. In the same way, Max Schede, having induced inflammation in the skin by tincture of iodine and the subcutaneous injection of a drop of croton oil, observed that suppuration took place, not in the immediate vicinity of the droplet, but at some distance from it, and near the vessels, which became as it were coated with a layer of escaped leucocytes. Talma repeated the experiments of Axel Key, and found two kinds of corpuscles in the inflamed cornea—one spherical in form, representing pus-corpuscles; the others, stellate and flattened, were the corneal corpuscles. No intermediate forms were found, and he too pronounced in favor of Cohnheim's theory. Friedlander came to the same conclusions from observations made on inflamed lung.—*Lancet.*———

The Medical Association of Alabama will hold its next annual session on the second Tuesday in April, the 13th day of the month. This Association has just been constituted by the legislation of the State, the State Board of Health. The meeting will be a very important one, and will take place at Montgomery.

EDITORIAL.

"Nullius addictus jurare in verba magistri."—Hor.

PORTRAITS.—It was intended that each number of this Journal should contain the portrait of some distinguished physician either of this country or Europe, but after again trying the

execution of these engravings on stone, it is found that the character of the work is not such as to give satisfaction to either the receivers or the giver of them. Three years since this same rule of issuing monthly portraits was adopted, and though it was abandoned from the unsatisfactory character of the work, it was believed that such arrangements had been made this year as to render the likenesses in every respect acceptable. Under these circumstances, two courses of action are to be considered; one, a continuance of unsatisfactory work; the other, the preparation of a large group picture, which will not only be a neat ornament to the physician's study, but be of greater pecuniary value than the number of small monthly pictures, which would otherwise be issued. There is, perhaps, no engraving which has been so much admired and valued by the Profession, as that which represents Harvey, the great English physician, describing, with the heart in hand, the circulation of the blood to the unfortunate King, Charles I., of England. This admirable large group engraving has been selected, and a copy of it will be securely sent by mail to each subscriber. No one, after receiving it, will fail to welcome it as a valuable substitute for the small portraits expected. It will be necessary to give the artist sufficient time for the completion of this elaborate engraving, but each reader may feel assured of receiving a perfect copy of it.

These difficulties, and a larger issue than usual, have delayed the appearance of this number of the Journal. Such delays are much regretted by the editor, but for them he asks the kind indulgence of the many friends and supporters of this work.

BREVITIES.

COMMENCEMENT EXERCISES.—The annual commencement exercises of the Louisville Medical College took place on the 25th of February, in the large and elegant Hall of the Public Library Building. Every seat was occupied, and large numbers of the audience had to stand in the side aisles.

The music was excellent, and the selections had been made with great judgment and good taste. After a prayer by the Rev. J. H. Heywood, Dr. A. C. Love, of Mississippi, delivered the salutatory address on the part of the class. Dr. T. D. Walker, of Georgia, was the valedictorian of the class. Both of these young physicians acquitted themselves with great credit, and were received with cordial and well-merited applause.

Major W. B. Beckham, a distinguished lawyer of Bardstown, Ky., by special invitation of the Faculty, graced this occasion with an eloquent address, which will long be remembered by all who heard it. Flashes of wit, numerous hits, passages of deep and tender pathos were exquisitely interwoven by the orator, and most attractively and impressively delivered.

Gen. John M. Harlan, the Vice-President of the Faculty, conferred the degree of Doctor of Medicine on the graduating class, and was followed by the Hon. John Roberts, President of the Board of Regents of the Kentucky School of Medicine, who conferred on them the Ad Eundem Degree of the latter school.

Professor H. M. Bullitt had prepared an address, which, owing to the lateness of the hour, was not delivered, but its merits and great interest are such that it has been published in the daily papers.

A very impressive feature of the exercises was the administration of the Hippocratic oath to the graduating class by the distinguished President.

The prizes were distributed as follows:

The first prize of the College, for general proficiency, was awarded to Dr. H. H. Darr, of Texas. This excellent student and most estimable young man was prevented by serious illness from attending the commencement, and the reward for his industry and labor was given in trust to a friend.

The next prize, for the best Thesis, was conferred upon Dr. R. N. Taylor, of Maysville, Ky.

Another prize, for the best Anatomical Preparation, was awarded to Dr. Louis Oppenheimer, of Louisville, Ky.

Prof. Gaillard's prize for the best Standing in the Principles and Practice of Medicine, was awarded to Dr. R. N. Taylor, of Maysville, Ky.

Professor C. W. Kelly's prize for the highest proficiency in Surgical Anatomy, was conferred upon Dr. A. W. Fly, of Mississippi. Dr. Fly also received the prize offered by Mr. Simon N. Jones, Druggist and Pharmaceutist, of this city, for the best examination in Anatomy. Students of all Colleges in this city having been invited to compete.

Professor Octerlony's prize for the best examination in Materia Medica and Therapeutics, was awarded to Dr. R. N. Taylor, of Maysville, Ky.

The prize of Professor J. M. Keller for the best standing in Surgery, was conferred upon Dr. H. H. Darr, of Texas.

Professor J. W. Maxwell's prize for the best standing in Chemistry, was awarded to Mr. C. P. Kirley, of New York, a first-course student of the Louisville Medical College.

Dr. Edward von Donhoff, Lecturer on Surgical Pathology, conferred the following prizes:

For the best examination in Surgical Pathology, Dr. R. N. Taylor, of Maysville, Ky., and Dr. Louis Oppenheimer, of Louisville, Ky.

For the greatest proficiency in Minor Surgery, Mr. C. P. Kirley, of New York, a first-course student.

The Hon. Wm. H. Granger, of this city, offered a prize for the best notes of Professor Octerlony's Clinical Lectures at the City Hospital. This prize consisted of fifty dollars in gold, and was conferred on Mr. C. P. Kirley, of New York.

John P. Morton & Co., the well known Publishing House of this city, offered a handsome prize for the best Thesis on some subject in Materia Medica. The committee, Drs. S. Brandeis, S. H. Garvin, and Wm. Forrester, awarded this prize to Dr. R. N. Taylor, of Maysville, Ky., who had written a Thesis on the Physiological Action of Gelseminum Sempervirens, which contained the reports of numerous original experiments and vivisections carefully conducted and recorded.

The class for this session was 311, and the graduating class numbered 83. The exercises of the evening passed off in a most pleasant and interesting manner, and the numerous and brilliant audience dispersed, well pleased with all they had witnessed.

THE commencement exercises of the Louisville Hospital College of Medicine were celebrated on February, 25th ult. The address on the part of the Faculty was delivered by Prof. W. H. Bailey, and was very justly well received by the large audience before whom he appeared. The class valedictory was delivered by F. B. Kennard, of Nebraska, and was a very unfortunate effort for all concerned. It was crude; badly prepared; chiefly remarkable for erroneous statements, unjust and untruthful claims, and a criticism of many subjects, in regard to which the speaker was evidently very grossly ignorant. It is difficult to understand how the Faculty could have allowed such an address to be presented on such an occasion; it is more difficult, however, to understand how they could have so far endorsed such a production as to allow its publication. The class of this young Institution, it was stated, amounted, at the close of this its first session, to 101. The graduating class was stated to be 56. In this list, however, there appeared the names of twelve well known young physicians; two of these being teachers in the Hospital College!! while the names of other physicians connected with the Institution appeared in the list of graduates. Why these young gentlemen should seek to be thus professionally born again, it is difficult to understand; unless, according to a Scriptural custom, being penitent for the past, they sought to become regenerate. A good idea, certainly, and a novel one unquestionably. Now, that these young gentlemen are thus regenerate, the Public will naturally expect that they should lead a new life. To be the first regenerate in a large and old Profession is certainly, to say the least, something of—not an honor, but an advertisement. In the theological world, it has always been difficult to reply to the familiar question, who are the regenerate?

But in the medical world, this difficulty no longer exists; every one in the Profession can quickly answer: Williams and Warren, and Combs, and Leslie, and Gardiner, and Todd, and Chandler, and the rest of the actors in this remarkable farce.

Seriously considered, however, it is unfortunate that the managers of this Institution should injure it and themselves by thus thrusting forward in the graduating class such a number of practitioners, as to make up a list of graduates nearly one-fourth larger than could truthfully have been claimed on this occasion. Such devices deceive no one, and only injure the Institution.

The prize list showed that there was much competition. The prizes were won by Drs. Kennard, Hays, Pearce, Schultze, and Leake. The salutatory was delivered by Dr. P. W. Barker, one of the class. The exercises were very interesting, and gave much pleasure to the large audience gathered to witness them.

THE closing exercises of the Medical Department of the University of Louisville were celebrated on the evening of the first of March. The exercises of the three Colleges are given in the order in which they respectively occurred. The class valedictory was delivered by Dr. John H. Potts, of Arkansas. The valedictory of the Faculty was delivered by Dr. David W. Yandell, of Louisville, Ky. The prizes given by this College were as follows: The gold medal to Dr. D. T. Bridgeforth, Mississippi; medal for second best standing to Dr. B. Friske, Kentucky; physiological prize to Dr. E. R. Anthony, Georgia; anatomical prize to Mr. H. B. Kurtez, Kentucky; therapeutical prize to Dr. Felix Coblens, Kentucky; for the best essay on "The Phenomena of Malaria" to Mr. D. Johnson, Tennessee; for the best notes on Dr. Cowling's lectures to Dr. B. B. Taliaferro, Virginia; obstetrical prize to Dr. George R. Dunson, Tennessee; for second best standing in obstetrics, prize to Dr. J. A. Shirley, Kentucky; chemistry prize to Dr. B. F. Friske, Kentucky; prize for operative surgery, to Dr. D. T. Bridgeforth, Mississippi.

RICHMOND AND LOUISVILLE

MEDICAL JOURNAL.

VOL. XIX. APRIL, 1875. No. 4.

ORIGINAL COMMUNICATIONS.

"Qui docet discit."

ART. I.—GASTROTOMY AND GASTROSTOMY. By J. H. POOLEY, M. D., Yonkers, New York.

The stomach may be, and has been, opened by surgeons with two separate and distinct intentions; first, for the removal of foreign bodies which have been swallowed accidentally or intentionally, and which by their bulk or form, are unable or unlikely to pass through the intestines and be discharged per anum, or got rid of by vomiting, or which give rise to immediately severe symptoms. This operation, and this alone in strict accordance with its etymology, is called gastrotomy.

Again, in certain cases of inveterate stricture of the œsophagus, whether from cancer, the cicatricial narrowing following the ingestion of scalding or corrosive liquids, or from any other cause, it has been proposed to obviate death and prolong life, or at least promote euthanasia, by making an opening directly into the stomach, and establishing a permanent fistula for the introduction of nourishment. This operation, which has actually been put in practice a number of times, is called gastrostomy, from gastro, and stoma, a mouth—stomach mouth—and as one very important office of the mouth is to serve as an

entrance or gateway to the stomach, it may be looked upon as bringing the entrance a little nearer, and making it more direct. It is to a study of these two operations, with more especial reference to the latter, that I propose to invite attention in this paper; and as I have no personal or individual experience to offer, and may justly infer from their rarity that most of my readers have none, we must look for the grounds of our reasoning and conclusions to the recorded literature of the subject. In all departments, and on every subject of medical science, it is the accumulated experience of others, which, fortunately, is the property of all, rather than individual experience, which is limited to its possessor, that goes to make the medical man thoroughly furnished for every good work. And it is the possession of both, a carefully accumulated personal experience, as well as a wide acquaintance with professional literature, rather than a blind reliance upon the first, that makes the superiority of the scientifically practical man over the practical man commonly and popularly so called. Nor can we say that the consideration of this subject is unimportant to any of us; for, however rare the occasions demanding either of these operations may be, they are as likely to occur to us as to anybody else, and when they do arise, we ought to be ready to act and advise intelligently on the subject.

Disclaiming, therefore, any attempt at originality in this paper, I have endeavored to bring together, in more or less detail, according to circumstances, all the cases on record, and give my own reflections and conclusions thereupon with the greatest brevity.

GASTROTOMY.

And first, of gastrotomy, or opening the stomach for the removal of foreign bodies, Hippocrates says, in his Eighteenth Aphorism (Adams' edition, vol. ii., p. 755): "A severe wound of the brain, of the heart, of the diaphragm, of the small intestines, *of the stomach*, and of the liver, is deadly."

But as far as the stomach is concerned, this aphorism of the "Father of Medicine" is not universally and literally true;

and as the fact that wounds of the stomach are not necessarily fatal, is essential to the very consideration of a surgical procedure, which consists in inflicting a wound upon it, we have thought it worth while to dwell for a moment upon this point as preliminary to our main subject. Hundreds of cases of recovery from wound of the stomach could no doubt be produced from the literature of medicine, but we will only adduce one or two, and these from the older records of science, for the double purpose of showing that such wounds may be recovered from under what we should now-a-days call very bad treatment, and that the knowledge of their not being invariably and absolutely fatal, is not recent, but old and well established.

The two following cases are taken from Turner's Surgery, published in 1736, and quoted from sources much older: "In the month of January 1632, being in the Gulf of Venice, Richard Partridge was wounded by George Farmer under the left hypochondrium, both being quartermasters of the ship Hector, whereof Mr. Wilde was commander. What he received into his stomach issuing out by the wound, which through the great mercy of God, was, notwithstanding, made whole in twenty-four days." The treatment, which it is unnecessary to detail, consisting of the application of various so-called mundifying and incarnating remedies, applied according to the old doctrines of surgery, together with rest and a rigid control of his diet."

James Oethius, in his Physical Observations, records such another: "In the Province," saith he, "of Fulda, I was familiarly acquainted with two industrious surgeons, David and John Schenk, who constantly affirmed to me that they had formerly cured a robust soldier who, by a rustic of Marpach, in the same Province, was, with a hunting-staff, struck through the right hypochondrium, and after they had diligently searched the wound, they perceived it had penetrated into the ventricle (stomach), and the meat and drink he had taken a little time before, to gush forth altogether thereat. Whereupon, declaring to the sick man and his kindred the greatness of the

danger, they essay the cure, and penetrating that part of the ventricle that was wounded to the wound of the muscles of the abdomen, and there, with one suture, fastened together the gaping ventricle and the said wound in the muscles; the patient enduring this dolorous kind of cure. At last, the wound, little by little, was consolidated, the sick man recovering his former health and strength."

Leaving these cases of accidental gastrotomy, we will now notice in detail those instances where the stomach has been intentionally opened for the removal of foreign bodies. There are two tables of these cases, one in an article on "Foreign Bodies in the Stomach and Intestines," by Alfred Poland, (Guy's Hospital Reports, Third Series, vol. ix., containing six cases); and the other in the second edition of Holme's Surgery, vol. ii., p. 549, in the article on "Wounds of the Neck," by Arthur E. Durham, which contains seven cases.

Of these cases, the first five are the same in the two tables; the sixth case, in Poland's table, he regards as questionable, being merely the record from the Abridgement of the Philosophical Transactions of the Existence in the Museum of Anatomy Hall at Leyden, of a knife, ten inches in length, removed from the stomach of a man, who lived eight years after; and he supposes it may refer to the same case which he makes first in his table, which I shall make first in mine, and the detailed history of which will be given further on. But, inasmuch as the size of the knife given is not the same in the two accounts, being said to be ten fingers' breadth long in one case, and ten inches in the other; and as the knife removed in the first case is said to be in the library of the Elector of Kœnigsburg, and the second at Leyden, I shall regard them as two distinct cases. To these I have been able to add only three others, making a table of eleven cases in all, the most complete so far collected.

I shall first give the details of some of these cases, and then proceed to point out the facts which they bring to light, and discuss finally the propriety of the operation, the indications

Table of Cases in which the Operation of Gastrotomy has been Performed for the Removal of Foreign Bodies.

No.	Date	Sex.	Age.	Nature of Foreign Body.	Mode of Operation.	After-treatment.	Result.	Operator, Authority, Remarks, etc.
1	1613	M.	Ad't	Small knife.	Unknown	Unknown.	Survived 10 y'rs.	Gruger, a Polish surg., Gross' Surg., 4th ed., vol ii., p. 611.
2	1635	M.	.....	Knife 6½ in. long.	Straight incision in left hypochondrium	Tents impregn'ted with balsam, etc.	Wound healed on 14th day.	Shoval, Chelius Surg., transl'd by Louth, vol. ii., p. 391.
3	1743	F.	.....	Knife.	Incisi'n on knife, which could be felt.	.....	Rapid recovery.	Hubner, Mem. de l'Academie Royal, 1743.
4	.....	.....	.....	Knife-blade 2 in.	.....	.....	Recovery.	Prof. Frizac, of Toulouse, Gross, 4th ed., vol. ii., p. 611.
5	.....	M.	.....	Knife 9 in. long.	.....	.....	Rapid recovery.	Florian Mathis, quoted by Sedilot.
6	.....	.....	.....	Knife 10 in. long.	Incision in left hypochondrium.	Sutures, pledgets of balsam, etc.	Very rapid recovery.	Schwaben, misquoted Swaben, by Poland.
7	1819	F.	.....	Silver fork.	Incision through left rectus muscle	Poultices, etc.	Rapid recovery.	Cayroche, quoted by Sedillot.
8	1823	M.	.....	Silver teaspoon.	Swelling cut down upon	.....	Rapid recovery.	Operator unknown, quoted by Sédillot.
9	1854	M.	32	Bar of lead weighing 1 pound.	Longitudinal incision.	Wound closed by sutures.	Rapid recovery.	Dr. Bell, Walpello, Iowa, Boston Jour., vol. lxi., p. 489.
10	.....	M.	.....	Knife.	.....	.....	Recovery.	Quoted by Poland, Guy's Hospital Reports.
11	1856	.....	.....	Catheter.	.....	.....	Death.	Glück in America, Günther Blutige, operationen am Menschlichen Körper.

for its performance, and the mode of executing it. The first case I give is the celebrated one of Schwabius or Schwaben, quoting again from "Art of Surgery," by Daniel Turner, London, 1736, vol. ii., p. 457, who himself quotes the account from one Dr. Beeker.

"In the year 1635, the 29th of May, stylo novo, a rustic young man, by name Andrew Grünherd, in the morning, feeling in his ventricle (stomach), by reason of some ill diet heretofore weakened, a kind of disposition to vomit; and, as he was wont, endeavored to procure it himself with the haft of his knife, provoked the gorge; and vomit not presently coming, did thrust in his knife a little deeper, which, partly by violence and partly by its own weight, so let down, and comprehended within the jaws, escaped the extremities of his fingers, and by little and little, tended to the ventricle, and stopped somewhat about the orifice, not without pain and dolour.

But although the swallow-knife being somewhat terrified, and by bowing his body downwards, essayed the egress of the knife, yet it was all in vain; therefore upon new advice, Laudibergensis endeavored rather the more to humect the mouth of the stomach with beer or ale, and so to promote the knife to the cavity of the ventricle; and which succeeded and the knife went down to the bottom thereof. And so the anguish and pain aforesaid ceasing, the countryman, though not a little troubled with his unwelcome guest, yet went he about his accustomed labors without trouble; the knife, as after excision it was seen, was just in length ten fingers in breadth. This the most miserable condition of the afflicted rustic moved the consul, Master Hartlein, to implore my counsel, to whom I gave this answer, that it was a matter of great moment, and that scarcely two such chances were to be found in the observations of physicians; and having declared the story of the Pragensian swallow-knife, I advised that the man should be sent for, that, by the whole college of physicians, deliberation might be had what were best to be done. Afterwards the case is laid open to the famous Mr. Crager, a prime colleague; and the patient

readily submitting himself, the 25th of June, seven and twenty days after it had been swallowed, was appointed for a general meeting; when examining all things, it was concluded his body should be prepared for the section, by giving him some balsamic medicines, especialy the Spanish balsam, so called and recommended by the senior physician, Dr. Lothus, together with the magnetic plaster after the example of the Pragensian cure. This, saith our author, I received from a very credible Spanish priest, who told me that in Spain it was not lawful to compound it, because men, trusting to its wonderful efficacy, made nothing to enter the list and fight, for it healeth the wound in twenty-four hours. The body being prepared, and all things necessary provided, at length on the 9th of July, one and forty days after the accident, there met the dean of the faculty, with the honorable members, together with the students, masters of arts, in company with that most experienced chirurgeon, Daniel Schwabius, now in Heaven; who calling upon the divine assistance and benediction, the rustics, who with undaunted courage waited the section, was bound down on a table, and, the place being marked out, the incision was made towards the left side of the hypochondrium, some two fingers' breadth under the short ribs according to the direction; and first the skin and fleshy pannicle (there being no fat seen) with the subjected muscles, as also the peritoneum, were carefully divided, when, although the ventricle did somewhat sink down, and avoiding our fingers, did so presently admit of apprehension, a little staying the operation; yet at length attracted with a needle crooked, it showed that the knife was there, which being laid hold on through the coats of the ventricle, and the point brought upwards, the said ventricle above the same was a little incised, and the knife successfully extracted; which was viewed by all the by-standers, applauded by all, and none more than the patient himself, who professed that this was the very knife he formerly swallowed; but the wound itself after the knife was drawn forth was quickly allayed. The knife being thus successfully brought forth, and

the patient eased of his bands, the wound cleaned of the blood, and the abdomen that had been incised closed together with five sutures, by their interstices, the balsam was instilled warm and dossils therewith impregnated laid on, and then a cataplasm of bole, white of eggs and alum, to allay all inflammation on the outside; about five in the evening he took this sequent decoction, with a portion of the sequent powder."

Here follow some very complicated prescriptions, which I omit, as also the laborious daily record, and quote only the end of the narrative as follows:

"And thus," saith our author, "by the grace and clemency of the Omnipotent Jehovah, and Supreme Director, and with the singular industry and dexterity of the physicians and surgeons, our rustic swallow-knife was restored to good health, complaining of no dolour of his ventricle; but being returned to his accustomed diet and ordinary calling, with us gives thanks to the immortal God; to whom therefore be the Glory, Praise, and Honor for ever and ever; amen."

A young fellow of Prague (probably the one referred to in the preceding narrative as the Pragensian swallow-knife), out of mere sport, says Crollius, swallowed a knife nine inches long, the point of which presented a little above the fundus of the stomach, towards its left side, and the handle towards the spine. Two months afterwards it was successfully extracted from the stomach by Florian Mathis, First Surgeon to the Emperor. Recovery took place with scarcely any symptoms.

In 1635 Shoval had an uncle who had swallowed a knife six and a half inches long, and had retained it about six weeks. A straight incision was made through the left hypochondrium two fingers' breadth under the false ribs, the knife was removed, and the wound joined together by five sutures. Tents impregnated with tepid balsam, and a cataplasm of bolar earth, white of eggs and alum applied. The wound healed on the fourteenth day after the operation. (Chelius' Surgery, Trans. by Louth.)

A Prussian woman had the misfortune to swallow a knife

seven inches long which she had introduced into her throat to excite vomiting. At first it stuck in the œsophagus, but afterwards descended into the stomach, where it remained three days without causing any pain. She afterwards felt pricking sensation, and very soon the point of the knife could be felt on the left side. The pains increasing, forced her to seek advice. Dr. Hubner, of Rastembourg, to whom she applied, made an incision over the point of the knife in the left hypochondrium on the eleventh day of the accident. He found that the blade had already passed through the stomach. The knife was extracted, and prompt recovery followed.

The next case is that of a lady at Bourdeaux, aged twenty-four. A small silver fork slipped into the throat and descended into the stomach. Here it remained for some months, hardly producing any symptoms; but at the end of this period the most violent vomiting came on, and soon brought the patient into a most dangerous condition.

By the advice of MM. Delpech and Fages gastrotomy was performed by M. Cayroch; the fork was easily extracted, and within twenty days the wound completely healed. (Report de l'Acad. Royal de Medicine Bourdeaux.)

A man had swallowed a silver teaspoon, and at the end of some months it could be felt as a tumor through the abdominal walls. The swelling was cut down upon and something metallic felt, the opening into the stomach was enlarged by bistoury, and the spoon extracted. The wound healed rapidly, and the patient made a speedy recovery. He confessed that he had stolen the spoon, and swallowed it for purposes of concealment. The name of the operator is not given, the case is quoted from Sédillot, in Holmes' Surgery, 2d edition vol. ii., page 550.

In 1854 a man in Iowa, in performing some tricks at legerdemain, allowed a bar of lead two inches long, by upwards of six lines in diameter, and weighing one pound, to fall into the stomach. Dr. Belle, of Walpello, removed the bar of lead by making an incision four inches in length from the umbilicus to

the false ribs some distance to the left of the median line. The opening made into the stomach was just large enough to admit of the passage of the bar, and required no sutures, as it became immediately closed by the contraction of the muscular fibres of the organ. The external wound was stitched in the usual manner. No untoward symptoms occurred, and the man recovered in less than a fortnight. (See Gross' Surgery, vol. ii., p. 610.

The following case is taken from "Günther Blutige Operationen am Menschlichen Körper, Vierte Abtheilung, p. 27," and is rather unsatisfactory from its brevity and want of reference. It is given almost literally just as it stands, being the sixth and last case to which he refers in his list of cases of this operation. ("6") "Glück in America, 1856, a catheter, which was about to be used for injection into the trachea, passed through the œsophagus into the stomach, gastrotomy, death." This, as far as I know, is the only fatal case on record. The last two cases are the only ones I have been able to find in which this operation has been performed in this country.

The first thing that strikes one upon a review of the eleven cases thus brought together, is the astonishing fact that out of the whole number only one death is recorded, a result which I venture to say no one previous to entering upon the study of the subject would have been prepared to expect, and which, as we shall presently see, is of importance to the just estimation of the analogous operation we have soon to consider. As to the propriety of gastrotomy for the removal of foreign bodies in cases which demand it, there is a tolerable unanimity of opinion among those who mention it at all in its favor. The cases which call for it must always be rare, and largely confined to lunatics, drunkards, and so-called jugglers, though we have on our table three cases where foreign bodies slipped into the stomach while being thrust far back in the fauces for the purpose of provoking vomiting, one where a spoon was swallowed for concealment, and one where a catheter was lost in the stomach during a surgical procedure. The history of foreign

bodies in the stomach is a very curious chapter, the most astonishing substances, and the most astonishing numbers of them, even to the extent of several pounds in weight, having been introduced into this organ, with at least temporary impunity; but as they almost always lead ultimately, if of large size, to severe suffering and death, and as they may be removed, as our table shows, with a fair prospect of success, we can by no means agree with Mr. Poland, who, in an interesting article on "Foreign Bodies in the Stomach, etc.," in "Guy's Hospital Reports," 3d series, vol. ix. p. 309, says: "On the whole, it appears that at present we can not consistently recommend the operation." A most unwarranted conclusion, it seems to me; for a review of the whole subject clearly shows that, as far as the evidence goes, the danger from operation is less than from the prolonged sojourn of large foreign bodies in the stomach or intestines. For of thirty-two cases of all kinds collected by Mr. Poland, twelve died, or more than one third, and in most of those who recovered, the foreign body was small or otherwise innocuous, whereas we have seen that only one out of eleven died of the operation; and with regard to that one case our information is most meagre and unsatisfactory, hardly sufficient to justify an inference of any kind.

Our own conclusion, therefore, is, that when there is sufficient evidence of a body so large as to make it improbable that it can pass through the intestines without danger, being lodged in the stomach, or when there is much pain or distress, the operation is called for, and should be performed. We have said, when there is *sufficient evidence*, advisedly, for as a certain proportion of these accidents occur in insane or drunken persons, this point may be the most difficult part of the whole case. An important indication may be afforded by the presence of a hard body perceptible externally in the epigastrium, and this should always be sought for. As to the mode of operation, little need be said here, as the main points will come up for discussion in our next section. In all the cases of gastrotomy for the removal of foreign bodies, where the mode of

operation is described, it has been by a straight incision in the left hypochondrium two or three inches from the median line, and extending from the cartilages of the false ribs downward three or four inches along the left linea semilunaris, exposing the edge of the rectus muscle. And as none of the cases have presented any operative difficulty of importance, there would seem to be no reason for innovation in this respect. I would only suggest, from experimental trial on the cadaver, that the incision be somewhat nearer the median line, and commenced higher up toward the arch of the diaphragm. Any vessel that bleeds should be secured as soon as cut, and should the rectus muscle be found in the way, it should be drawn aside rather than cut, if possible. It has been proposed by many authors, even so far back as old Turner, that the stomach be distended with fluid before the operation, so as to be more readily brought into view; but I do not think this is to be recommended, as the presence of a foreign body large enough to justify the operation would be guide enough, and the danger of the fluid passing into the peritoneal cavity, and in these days of anæsthetics the danger of its producing embarrassment by exciting efforts to vomit would more than overbalance any problematical advantage it might possess. It has never been done. It has also been proposed to open the stomach with a grooved trocar, which would serve as a director for enlarging the opening. This seems to be one of those expedients that belong rather to the closet than the operating table; I can see no possible benefit from it, and no one has ever thought it worth while to try it. After the incision has been carried carefully through the peritoneum, the finger will easily detect the left or thin edge of the liver, and just above and beside it the stomach, and probably through its coats the foreign body. The stomach may then be seized with a pair of hooked or toothed forceps, which would be better than a hook, as requiring less space for their manipulation, and brought to the external opening and the foreign body extracted through as small an incision as possible. In most cases probably there will be no need of closing the

stomach wound, as it will close itself as in Dr. Bell's case; but should it not, a fine uninterrupted suture (gastroraphy) may be used. No directions are needed for the care of the external wound, which will be treated on general principles, modified by the individual preferences of the operator. Of course the patient should be rigidly confined to bed, and his diet restrained for a week or two after the operation. Severe vomiting would be most to be dreaded of any symptom that could supervene; and I would suggest in addition to any means used to control it, firm compression with a bandage. Pain must be met by the hypodermic use of morphine.

GASTROSTOMY.

We come now to the second and most difficult portion of our subject—viz., that of opening the stomach for the purpose of establishing a permanent fistula for the introduction of food in cases of complete closure of the œsophagus. An operation first performed by Sédillot, of Strasbourg, in 1849, who gave it the name of gastro stomie, or stomach mouth, a term which modified into gastrostomy we propose to retain as worthy to become a recognized surgical technicality.

That the idea of introducing food directly into the stomach through an artificial opening in those terrible cases of death from starvation, where there is complete obstruction of the œsophagus, should have suggested itself to surgeons, can not be wondered at; it was only what we might have expected from their humanity and enterprise. Since the first trial by Sédillot the operation has been repeatedly performed, but hitherto without success. Is this want of success inherent in the operation and unavoidable, and should it, therefore, be abandoned? Or has it depended upon avoidable circumstances in the cases operated upon, and does it, therefore, demand further trial under more favorable circumstances? These questions we shall seek to answer by a study of this operation, conducted in the same way as in gastrotomy for the removal of foreign bodies.

As in the first section, we deemed it proper to show, as a

preliminary, that wounds of the stomach are not necessarily fatal; so here we will first settle the fact that the continuance of human life is compatible with the existence of a gastric fistula, disregarding for the present the well-known fact of the tolerance of fistulæ of this kind in the lower animals, to make use of it further on.

And here, fortunately, our material is prepared for us—ready to our hand. In an excellent and very interesting paper by Dr. Charles Murchison, in vol. xli. of the Medico-Chirurgical Transactions, there is a table of twenty-five cases of gastric fistula, in most of which life was prolonged for a considerable period, in some for many years; in one, the celebrated case of Alexis St. Martin, for over thirty-five years.

Among Dr. Murchison's concluding remarks are the following: "It is astonishing to observe how little influence the existence of gastro-cutaneous fistula has upon the general health. In most of the cases resulting from wound or simple ulcer, the patients are stated to have enjoyed excellent health. This was particularly remarkable in Wencher's case of a woman who lived for twenty-seven years, following her ordinary avocation; and is still more so in the case of Alexis St. Martin. In Catherine Ross (the Doctor's own case, who was still living at the date of the article, having had the fistula over four years), "the state of general debility is more to be attributed to a general derangement of the entire nervous system than to the effects of the fistula." Having thus shown in brief that the existence of a gastric fistula is not in itself inimical to life, we will proceed as before; first, to notice some of the cases of gastrostomy in detail, and then discuss the propriety of the operation, the indications for its performance, and the mode of executing it.

I have collected eighteen cases,* which is believed to include

* Two of these cases have been derived from a recent article of Dr. Jacobi's on the subject in the "New York Medical Journal," published since this paper was first written—viz., in August and September, 1874. The cases thus acquired are the Doctor's own case, and one of Von Shaden. The three last cases have come to my notice since the publication of Dr. Jacobi's paper.

all on record up to the present time; the largest previous table, containing nine cases, is by Mr. Durham, in the second edition of Holmes' Surgery, vol. ii. p. 546. Let us now examine briefly the history of some of these cases.

Sédillot's first case was a man aged fifty-two, with epithelial cancer of the œsophagus; symptoms of obstruction had existed for five months, and were rapidly increasing in severity; great debility; absolute inability to swallow; passage of bougie impossible. Frictions, local applications, and nutritive enemata had been used. The operation, undertaken at this stage of hopeless exhaustion, is described as follows: Chloroform was administered (this is forbidden by several authors) and a crucial incision was made through the skin over the top of the rectus muscle. Sheath and muscle similarly cut through and peritoneum divided; great omentum exposed; by drawing this downward the stomach was brought into view and the greater curvature drawn up to the wound; anterior wall punctured midway between the cardiac and pyloric end.

A canula was introduced so made as to hold the stomach in contact with the abdominal parietes, and closed with a plug. Warm fomentations were applied over the abdomen. Eau sucrée and beef-tea injections from time to time; greenish bile accumulated in the stomach and escaped when the plug was withdrawn from the canula. There was no pain, the patient slept at intervals and was comfortable during the night; in the morning dyspnœa and quickness of breathing came on, followed by rapid death fifteen hours after the operation. Post mortem revealed only slight and equivocal sign of peritonitis.

Sédillot's second case was also one of malignant disease of the œsophagus, where excessive dysphagia had existed for nine months. A long incision was made on the left side, two fingers' breadth from the median line and two centimetres below the false ribs; and a second incision perpendicular to this, so as to make a cruciform incision.

The stomach was seized and fixed to the abdominal walls by five or six points of suture carried through its peritoneal and

muscular coats only; opening the stomach being postponed till it was attached to the parietes. Chloroform was administered. Two hours and a quarter after the operation the stomach was partially torn from its connections by a fit of coughing and passed into the abdomen; it was drawn out again and fixed to the skin by Assalini's forceps.

The part thus included became gangrenous, and when removed five days after the operation the stomach was opened into. The surrounding adhesions were then firm. Through the fistulous opening wine, beef tea, milk, etc., were introduced, but they would not remain in the stomach. The patient died ten days after the operation of exhaustion and peritonitis.

As Sédillot was the pioneer of this operation, so Cooper Forster, of Guy's Hospital, was the first to perform it in Great Britain, having no previous knowledge of Sédillot's cases. We now proceed to consider Forster's cases, which were also two in number. His first case was for malignant disease in a man aged forty-seven. He operated without chloroform, for fear it might produce vomiting; and by a long incision two and a half inches to the left of the median line, commencing an inch or more below the cartilages of the false ribs and extending downwards about three inches. The orifice in the stomach was left about large enough to admit the little finger. Milk, eggs, and rum, in small quantities, were administered every half hour through an elastic tube passed into the stomach through the wound, with great relief to the patient, who died, however, of exhaustion forty-four hours after the operation.

Mr. Forster's next case, one of the most important and instructive on record, is as follows: James G., aged four years and four months, was admitted to Guy's Hospital February 2, 1859, under Dr. Addison's care, in an extremely thin and emaciated condition. Seventeen weeks before admission, the child swallowed some corrosive poison, supposed to be a solution of potash or caustic alkali, used for bleaching and cleansing linen. This accident was followed by the usual symptoms of pain and inflammation, and consecutively by a stricture of the œsopha-

Stricture of Œsophagus.

No.	Date	Sex.		Cause of Death.	Operator and Authority.
1	1849	M.	6s.	Exhaustion, slight peritonitis.	Sédillot, Contributions à la Chirurgie, vol ii., p. 484.
2	1853	M.	5	Exh'n and periton's.	Sédillot, Contributions à la Chirurgie, vol. ii., p. 494.
3	1854	M.	6s.	Exhaustion, no peritonitis.	E. Feuger, of Copenhagen, Archiv für Path. Anat. and Phys., vol. 6, p. 350, 1854.
4	1858	M.	4s.	Exhaustion, no peritonitis.	Cooper Forster, Guy's Hospital Reports, vol. iv., p. 13, 1858.
5	1859	M.	4	Peritonitis.	Cooper Forster, Guy's Hospital Reports, vol. v., p. 1, 1859.
6	1860	F.	4s.	Exhaustion.	Sydney Jones, Trans. Pathological Society, vol. ii., p. 101.
7	1866	M.	5s.	Exhaustion.	T. B. Curling, London Hospital Reports, vol. iii., p. 218.
8	1866	M.	6w.	Broncho-pneumonia	Sydney Jones, Lancet, vol. ii. 1866, p. 665.
9	1868	M.	7s.	Exhaustion.	Durham, Guy's Hospital Reports, 3d series, vol. 14, p. 195.
10	.....	M.	....	No connection with operation.	Bryant, Surgery, p. 293.
11	1869	M.	2s.	Exhaustion.	F. F. Maury, Am. Jour. Med. Sciences, April, 1870, p. 365.
12	1869	F.	5	Exhaustion.	John Lowe, Lancet, July 22, 1871, p. 119.
13	1867	M.	5	Exhaustion.	Francis Troup, Ed. Med. Journal, July '72, p. 36.
14	1867	F.	5s.	Exhaustion.	Von Thallen, Schmidt's Jarhbücher, vol. 136.
15	1874	F.	....	Exhaustion.	Jacobi, New York Med. Jour., Aug. and September, 1874.
16	1872	M.	3	Peritonitis.	Mr. Thomas Smith, Med. Times and Gaz., June 22, 1872, and Lancet, same date.
17	1872	M.	4s.	Exhaustion.	Mr. McCormac, same reference.
18	1872	M.	....	Exhaustion.	Mr. Le Gros Clark, same reference.

The operation was done on Sunday, and he went on very comfortably till Wednesday. On Wednesday morning, early,

This accident was ... by the usual symptoms of pain and inflammation, and consecu... tively by a stricture of the œsopha-

gus, which had been progressively increasing up to the date of his admission. He then complained of pain in the throat and epigastric region. He swallowed a quantity of beef-tea two days before his admission, but has taken nothing since, though he does his best to get down something and overcome an obstruction which evidently exists. There is nothing to be seen on looking into the throat. Various futile attempts were made to relieve his sufferings until the 13th of February, eleven days after his admission, when Mr. Forster, who had been desirous of doing so sooner, operated in the following manner: Chloroform was administered, and an incision made about two inches in length along the outer edge of the rectus muscle in the left hypochondriac region, commencing at the cartilages and opposite the space between the seventh and eighth ribs. The muscles and fasciæ were cautiously cut through, and several vessels tied, which bled very freely; the peritoneum was then exposed and carefully divided on a director; coils of small intestines immediately appeared in the wound, but were held on one, while two fingers were passed up to the diaphragm to find the œsophageal end of the stomach. This part of the operation was attended with some difficulty. When, however, the stomach was reached, it was easily recognized by its thickened appearance and velvety feel; also the greater curvature being the part exposed, the vessels passing along it, as also the descending portion of the great omentum, rendered it certain that the viscus now in view was the stomach. An opening was immediately made into it, but a large vessel that was divided required ligature at the two ends, as they bled profusely; the edges were then stitched carefully to the abdominal parietes by an uninterrupted suture, and the rest of the wound in the abdomen closed by similar means.

After the operation, he was fed through a tube every hour, night and day, unless he was sleeping, and seemed to be much relieved by what had been done for him.

The operation was done on Sunday, and he went on very comfortably till Wednesday. On Wednesday morning, early,

he was very comfortable, and was being fed every hour and a half through the tube, which he seemed to enjoy; nay, he even asked for his poultice (as he called it) when the time arrived for the nourishment to be administered. About 10 o'clock A. M., after having been fed, he suddenly complained of great pain over the abdomen. He became collapsed, cold, the eyes sunken, pulse almost imperceptible, quickly sunk into a comatose state, and at 2 P. M. he died. At the post-mortem it was found that some of the sutures had given way, and general peritonitis had ensued. Scarcely any adhesions had formed between the stomach and parietes. Other details I omit.

I shall not burden this paper with any further details of these cases, particularly as a résumé of all of them has recently been published by Dr. Jacobi, of New York, in the "New York Medical Journal" for August and September, 1874. Suffice it to say, that they all died, the average duration of life after the operation being a little over three days; the longest period being thirteen days, the shortest fourteen hours. Ten died of exhaustion. In only two cases were there marked evidences of peritonitis, and both of these were cases where the sutures at the junction of the stomach with the integument had given way; and the one who lived thirteen days, died of broncho-pneumonia. In thirteen of the cases, the stricture was from malignant disease; in one, from the effects of a corrosive poison, and in one from syphilis.

Having seen that wounds of the stomach, however rudely inflicted, are not necessarily fatal; that gastrotomy, for the removal of foreign bodies, gives only one death in eleven cases; that human life has been prolonged in comfort for many years with a gastric fistula in numerous cases, and knowing well that the lower animals seem to endure such a condition with absolute impunity, the results of this table must be pronounced, at first sight, quite unexpected and inexplicable. It seems clear to me that the explanation is to be found solely in the debilitated condition, in many cases the almost dying condition of the patients operated upon. In no one case does it appear

that the operation shortened life; while in several it undoubtedly prolonged it, and in all it mitigated the truly horrible sufferings from hunger and thirst.

It is a significant fact, that every one who has operated seems to have been convinced more firmly afterwards than before of the propriety of so doing; only one regret being expressed—viz., that it was not done earlier.

Mr. Bryant says: "In my own case the man lived five days; the operation had nothing to do with the death, and the local repair was most complete. The operation has not hitherto been successful, I believe, because it has been put off until too late a period; in the same way as colotomy was unsuccessful, until it was undertaken at an earlier stage of the disease. Let gastrotomy have the same chance as colotomy has now had, and it will become as established an operation in surgery."

These words of Bryant express, in my own opinion, the legitimate conclusion to be derived from an important survey of the subject. The operation is not yet to be abandoned, but surgeons must have the courage to propose; and when patients will submit, perform it earlier, before the vital powers are so far exhaused as to forbid the hope of rallying, and when the patient does not die at all from the operation, but simply because relief comes too late.

Such opportunities will be infrequent, as it is hard to overcome the vis inertia even of surgeons in the face of so much discouragement, and in cases where so little can be promised, either to their emolument or reputation, and patients will always be too ready to court delay, even to their own destruction; nevertheless, we must insist that the operation ought to be still further tried under more favorable circumstances, and by the results thus obtained, let it stand or fall.

Of course, in the majority of cases, it is only a palliative at best, and for this reason some insist that it is utterly unjustifiable, and say that it is at best but a refinement of cruelty. Such objections are best answered by translating into plain English the logic which they imply, which is simply this, if people must die soon, the sooner they die the better.

Though fully convinced that the operation is a proper and justifiable one, it is not so easy a matter as might be supposed to point out the exact indications for its performance. Much, almost all, must here be left to individual judgment. But we may lay it down as a general or approximative rule, that when it is clear that the stricture, whatever its nature, is of a progressive character, and has reached the point of seriously interfering with the patient's nutrition, then operate. A very embarrassing fact presents itself in the history of many cases of œsophageal stricture, which is, that after deglutition has been almost or quite impossible for several days, and dissolution seems imminent, all at once, and without obvious cause, an amelioration takes place, the patient again swallows some nourishment, and for a time improves, and even in some cases has lived for a long time. Now, say some, if you operate, except in the extremest cases, how do you know that such a spontaneous amelioration might not have taken place if you had waited? I answer, we don't know, and we don't want to know; such occurrences are too rare and exceptional to form a proper guide for the action of reasonable men, and such a balancing of *possibilities* rather than *probabilities*, would paralyze all human effort. Besides, it remains to be seen whether, under proper circumstances, gastrostomy is such a dangerous operation as to demand this extreme caution.

To return for a moment to the causes demanding this operation and their influence upon its result, as we have seen sixteen of the eighteen cases recorded were for cancerous disease, and of these ten are described as epithelial, a form of malignant disease which is the slowest of all to affect the general system, and which, unless it involves some organ essential to life, admits sometimes of almost indefinite prolongation of existence; here we are reduced to the miserable alternative of watching the horrible sufferings and death of a patient, not directly from his disease, but from sheer starvation, with the certainty that, could nourishment be supplied, life, for a considerable time at least, is still possible.

At the same time, as the efforts to swallow become more difficult and painful, they become also more irritating and aggravating to the disease that makes them necessary, and constantly increase it; while, on the other hand, could a gastric fistula be safely established, there is no doubt that in many instances the rest afforded to the œsophagus would enable it, after a time, to resume to some extent its functions.

In a case of syphilitic stricture, the respite obtained by the operation might give time for a complete cure to result; while in the case of a stricture from the results of corrosive poison, most likely to occur in a child, though if complete very little hope of the restoration of the canal could be entertained, almost anything would seem better than to see the miserable little sufferer die of starvation, and it might be possible to prolong life for many years.

In this connection, there is one very curious fact that deserves a passing mention. Bardeleben found that though life was easily maintained in dogs that simply had a gastric fistule, but took food in the natural way, that in a dog in which he obliterated the œsophagus, after the successful establishment of such a fistula, he was unable, with all possible care, to prolong life more than a year. This observation, though being a solitary one, is therefore of little practical value, but curious and interesting.

It only remains, in conclusion, to speak of the operation itself. Sédillot, its originator, made use of a crucial incision, in which he has been followed by only one other operator, Mr. Lowe, of the Norfolk and Lynn Hospital. I can not see any advantages to be derived from this form of incision, and as it has obvious disadvantages, it may be dismissed with this bare notice. One surgeon, Feuger, of Copenhagen, is said to have operated by a transverse incision; but I have not been able to obtain access to the particulars of his case, and should think this method quite as objectionable as the last. *Eight of the operators have made a straight vertical incision along the

* In three cases the mode of operating is not mentioned.

left linea semilunaris, from the cartilages of the lower ribs more or less high up, according to fancy, and extending downward the necessary distance, say three or four inches; and this is the method described in Maunder's Operative Surgery, London, 1873, under the strange, awkward and barbarous term of *gastro-stomachotomy!*

Notwithstanding the general preference that has been given to it, I do not think this method the best.

Several of the operators speak of considerable difficulty in reaching the stomach through this incision; and in the instances in which I have had the opportunity of trying it on the dead body, I found it very inconvenient indeed. It must be borne in mind that an incision that would answer very well in gastrotomy for the removal of foreign bodies, would by no means necessarily be as commodious in this case. In addition to not having a foreign body to guide us by its bulk and hardness, we have to search for an empty and contracted stomach in an emaciated subject, where it is drawn far up under the arch of the diaphragm; and furthermore, we need here an incision that will enable us to attach the stomach to the parietes with the least possible stretching.

In point of fact, this tension on the sutures seems to have been the main cause of the fatal result in both Sédillot's and Cooper Forster's second cases, and is very plainly seen in the diagram of the appearances after death in the latter gentleman's first case, published in the Guy's Hospital Reports.

This tension is liable to be aggravated by an unnecessary anxiety which surgeons have exhibited to open the stomach as near the cardiac extremity as possible; this may be theoretically of some importance, but it is certainly more so not to put the organ on the stretch any more than is unavoidable; and the rule undoubtably is to open the stomach at that point which will give rise to the least tension or dragging. Taking everything into consideration, I believe an oblique incision along the cartilages of the ribs, and extending pretty high up toward the xyphoid cartilage, as practiced by Bryant, and more particu-

larly described by Maury, the first American operator, to be the best.

Dr. Maury describes his incision as follows: "A curvilinear incision, the convexity of which presented toward the median line, was commenced at the sternal extremity of the seventh intercostal space, and carried downwards and outwards for nearly four inches, exposing the sheath of the rectus muscle." Whatever form of preliminary incision is practiced, the dissection is carried slowly downwards, as in all similar operations, layer upon layer being divided upon a director until the peritoneal cavity is opened. When the stomach is distinctly made out, its anterior wall is to be transfixed at the most convenient spot that offers by two ligatures with a needle at each end, passed in about an inch apart, and an opening being made then between them, they serve to fix the coats of the stomach to the abdominal wall. Owing to the danger of stitches tearing out, it is perhaps advisable to introduce a short broad canula with wide projecting shoulders or flanges. For the first few days after the operation it is advisable to forbear putting food into the stomach, but the patient may be sustained by nutritious enemata, while time is given for some degree of consolidation to take place between the stomach and the abdominal parietes. All medicine should be administered hypodermically.

When food is first introduced into the stomach, it should be in small quantities, and in a fluid and easily assimilable form—such as milk, beef-tea, eggs, etc., with or without some form of alcoholic addition, as the case may demand.

ART. II.—BURNS—DANGER TO LIFE COMMENSURATE WITH EXTENT OF SURFACE INVOLVED. By A. D. BINKERD, M. D., of Miller's Eddy, Pa.

I report the following cases partly for the benefit of the young practitioner and partly as a reminder to the Profession, showing what dangerous ground we tread upon in venturing on

unguarded prognosis in cases of scalds and burns, when a considerable extent of surface is involved.

No case, however simple, can be said to be entirely free from danger. A very small wound, scarcely penetrating the true skin, may by neglect or mismanagement mar the beauty and impair the fortune of an individual for life.

Who has not seen the unsightly eschar, the distorted limb or anchylosed joint, the result of a burn which the patient sustained perhaps prior to his ability to recollect? The deformity is permanent, and must remain during life.

The occurrence of a burn, however trivial, upon the hand, arm, neck or face of a little girl, is especially to be deplored. Such a case should always monopolize the humane surgeon's most intellegent care. Too much vigilance, care or exacting sacrifice can not be bestowed upon such a case. Remember, if there be disorganization of the true skin, there must remain a mark till the body turns to dust. The extent of this mark or deformity is measurably under the surgeon's control.

The surgeon's mission is to use his utmost endeavor, by combined effort of knowledge, skill and ability, to save life, allay pain, and prevent or control deformity. In a large per cent. of burns, these agencies may avail much. In very many also the utmost that can be done must fail to be of any benefit whatever to the patient. Long since it was fully demonstrated that the skin contains a large amount of highly sensitive nerve matter, while the great mass of the nerve-centers remains naturally in a state of extreme anæsthesia. In this arrangement the wisdom of the Creator is beautifully demonstrated. The outer nerve fibres, nearest all possible danger from external violence, are the most vigilant in the discharge of their duty, the most zealous for the welfare of the body. The nerve-centres being less sensible, probably enable the patient the better to endure any injury to or inflammation of the peripheral parts.

Experience has shown that the whole nervous system is liable to a certain subtle, indescribable and injurious influence, the result of external violence, which, for want of a better or

more comprehensive term, we call *shock*. Any considerable degree of irritation inflicted suddenly upon the skin in some way or other, inflicts a corresponding degree of *shock* upon the nerve centres. A fall from some elevation, a blow upon the head, or some sensitive part of the body, or even a fright, may produce a similar result. The existence of shock may be apparent to the eye, by pallor and coldness of the skin, but most of all, to the tactile sense by an almost imperceptible pulse. And when dangerously severe, by efforts at emesis.

The danger to life in scalds, burns, and other severe and extensive irritations of the skin, is generally commensurate with the severity of the shock sustained by the patient. This was lamentably demonstrated only a few years ago in the State of New York, by a minister of the gospel (?) whipping his child with a shingle. His inhuman flagellation was bestowed upon the greater portion of the surface of the child's body. This severe and extensive irritation of the skin produced such a degree of shock to the young and susceptible nerve-centres as to result fatally to the child within a few hours.

Every surgeon knows that if erysipelas follow in one case, the opening of an abscess on each of two patients, one of whom faints during the operation, the erysipelas will appear on the patient that fainted. The shock then must be the main thing to be provided for or guarded against. It is the effect of some known cause, such as external violence, bestowed with great force upon a small amount of surface, or extensive irritation to the sensitive peripheral nerves.

In burns, the severity of the shock depends not so much upon the force of the irritating agent as upon the extent of the surface involved. In other words, if the irritation be extended over a considerable area, the shock sustained by the nervous system is greater than if the same amount of irritation be expended upon a smaller surface, though the wound be deeper. Probably for this reason it has been stated of those who have died of extensive though not deep burns, that they had inhaled fire, and thereby sustained fatal injury. In two cases

out of three it is safe to question the statement. But as this time-honored opinion generally satisfies the friends of the unfortunate victim, and no one cares to investigate the matter to demonstrate facts, time rolls on, and the error is promulgated by high (?) authority.

There may be cases in which the patient sustains injury by inhaling flame, steam or noxious gases, but I believe them to be very rare, at least in persons who may have escaped from the fiery ordeal with life and consciousness.

The following may be offered as argument against the inhalation theory: At any sudden fright, such as a gush of wind in the face, or dash of water upon the chest, or any sensation threatening violence to the lungs, the glottis is instantly firmly closed, and so long as the danger continues, it is held so, until a sense of suffocation greater than the threatened danger forces the muscles to yield, in hope of getting fresh air. It is possible to hold the breath one minute without injury resulting. It is not possible to remain so long in a brisk flame, whether we hold our breath or not, without sustaining fatal injury. Who has not seen charlatans and mountebanks swallow the flame of a candle with impunity? The carbonic acid, ammoniacal vapor, and moisture of the mucous membrane completely protect the parts against instant injury, even though the flames had entered the mouth. In short, I do not believe the "internal injury" theory will stand the crucial test of science.

The eleven servant girls who, when driven by fire into the uppermost story of the Fifth Avenue Hotel, New York City, on the night of December 8, 1872, and there perished in groups together, were probably unsconscious long before the flames reached them, though they were burned almost beyond recognition. Next morning, at the morgue, as I looked pityingly upon their mutilated remains, and being somewhat familiar with the circumstances that led to their death, I confess to a sense of relief at the thought that they were beyond all bodily pain ere the flames touched them. Nor fire, nor hot fluid of any character will blister a cadaver when

applied ten minutes after death, except upon anasarcous subjects.* These were carbonized.

At 7 A. M., July 28, 1870, there occurred in sight of my office, then at Parker's Landing, a gas explosion, followed by the usual disastrous conflagration, so common and so fatal in the oil regions. The well at which the explosion occurred is on the east bank of the Allegheny river, only a few rods from the water. The sucker-rods and the tubing had just been drawn for repairs. The oil flowed through the casing at intervals as high as the top of the derrick, and falling back, saturated the clothes of the operatives and filled the conductor hole, where it stood like water in a well. By and by the oil found its way, unobserved, into the cellar of an adjacent building. Here the gas accumulated till it filled the cellar and even rose up as high as the stove, in which a fire had just been kindled, in a room on the first floor. Then occurred a flash. In an instant the fire was communicated to the oil and gas issuing from the well. This all was accompanied by an explosion that turned many eyes towards the spot, only to witness a most horrifying sight. Fury and terror ruled the hour.

John W. Rinker had just entered the derrick, his clothing all saturated with oil, and George Carter, a lad or young man of nineteen summers, was just passing between the derrick and the house at the instant of the explosion. Both men issued from the flames demon-like and rushed into the river. This occupied from twenty to thirty seconds of time—certainly not more than one minute.

Rinker's clothing being saturated with oil, burned fiercely until submerged beneath the water, where he would have perished but for the help of friends who came to his rescue. Carter's clothing being very dry, burned less fiercely. He also ran into the river, from which he was taken by those who first appeared upon the scene of the accident.

Being summoned in great haste, I found Mr. Rinker badly burned, pale from shock and intense suffering, walking the

* Wharton and Stillé,s Medical Jurisprudence, section 867, p. 708.

floor, uttering lamentations, and calling every few minutes for more water. His woolen shirt, all except the seams, was literally burned off his back, leaving his entire chest, arms, neck and face, a roasted, excoriated mass full of agonies. Here the skin was altogether missing; there it was lying in tattered shreds, while some of the fingers had slipped out of their integument as out of a torn glove. His entire surface, from the hair of the head to the waistband of his pants, was either excoriated or highly congested. I administered at once a grain of the sulphate of morphia, and made all possible haste, assisted by several attendants, to cover the parts with soothing applications, finishing up with a layer of cotton and the roller bandage. As there was yet no abatement from suffering, I gave two grains more of the morphia. In about an hour his system began to respond to this heroic dose, and had a little rest. He was not free from pain, and constantly craved water, of which he drank copiously at short intervals. The expression of countanence and the great extent of irritated surface convinced me at once that the patient could not survive. His system did not rally from the severe shock for several hours. After reäction took place the fever soon became most violent. Like a watch that had just broken its mainspring, the machinery that carried on his vital functions simply ran down. He soon became delirious, drank and vomited incessantly, and died comatose on the third da . Several physicians of much experience were called at once by numerous importunate friends, and I was surprised to hear some of them express an assurance of the moribund patient's recovery. The skin of the entire chest, together with that of the arms, hands, neck and face, was either wanting, crisped, blistered or highly congested. In such a case it requires but little experience to teach the physician to be guarded in giving a prognosis. When even one-third of the surface of the body, especially so near the vital organs, is congested to the extent of a slight vesication, the prognosis must be unfavorable.

I did not see Carter for several days after the accident, as another physician was attending him. When called to assist

in the case, I found Carter had sustained a very severe wound, embracing an area of from four to five superficial feet. The wound was principally on the arms and back — the breast and sides were comparatively free from injury. I learned that the shock was followed by a reäction of the most violent character. In his case there was less thirst and no vomiting—generally a favorable symptom. The heart's action was measurably controlled by equal parts of the fluid extract of veratrum and sweet spirits of nitre, in eight-drop doses every three or four hours, or at greater intervals, according to the condition of the pulse. Saline cathartics and anodynes were called into use whenever indicated. For some days his recovery seemed doubtful. He finally rallied and went on to convalescence after much patient care and the persistent daily use of the wax and oil ointment, or as it is here known, "*burn salve.*" Whoever may try his hand at making the preparation, will do well to use only one drachm (℥j) of the bismuth instead of one ounce (℥j), as given by mistake in the November number of this Journal.

When Carter was but two years old, he sustained a small but severe burn upon the back just below the right scapula. A deep eschar testified to its severity. Now after a lapse of seventeen years the same part was again severely burned. The analogous tissue of the first burn showed no tendency whatever to heal, but sloughed out to the very bottom, and then began in the new healing up very slowly but soundly, long after the rest of the wound was quite healed up.

On the night of December 19, 1870, I was summoned in haste to go to George Slagles. It was a stormy night, and very cold. As the family were preparing to retire, one awkward fellow attempted to fill a miner's lamp from a can containing about four quarts of fresh, crude oil without first extinguishing the flame of the lamp. Seeing what he was about to do, several voices chimed in remonstration. His reply that he was not afraid, was abruptly ended by the explosion of the can, scattering the burning contents upon all who were near enough to

receive a part. A little girl ten or eleven years old had just retired in the same room. A little boy was sleeping by his mother's chair. The bed being in flames, the girl jumped up and ran through the burning liquid in her night clothes, and on reaching the door, turned around, again ran back and jumped into bed. On being taken out, she was fatally burned. The shock was so severe that she complained constantly of freezing. She drank and vomited freely, soon became delirious, and died next morning.

The little boy was but slightly burned on the chest. In the morning he said he felt pretty well. Violent congestion of the lungs set in, of which he also died on the second morning. This was a result I had least anticipated. These cases go far to show the danger of burns about the body, especially on the chest, and should teach us to be guarded in giving a prognosis in such cases.

ART. III.—TWO CASES OF STRICTURE, WITH COMMENTS. By BENJ. RHETT, M. D., Abbeville, S. C.

"Who shall decide where doctors disagree?" "I will tell you," says Sir Henry Thompson, "what spasmodic stricture is. It is exceedingly useful as an excuse for the failure of instruments. It is a refuge for incompetence. When you can not pass a catheter, when you find it exceedingly difficult to get anything in, and in fact you wish to desist, it is a very convenient thing, and has always been so recognized for the doctor to say there is a spasm."

On the other hand, Erichsen holds the following language: "The possession of muscular contractility by the urethra is, however, obvious, from the fact that a bougie may occasionally be introduced with ease, but that the surgeon, on attempting to withdraw it, will find it tightly grasped; so occasionally, on introducing the instrument, he will meet with an obstruction which, on steady pressure, will yield," etc., etc.

"These facts, though sufficiently convincing to many surgeons, had failed to carry proof of the existence of spasmodic stricture to others, until the recent researches of Kolliker and Hancock, which have been referred to, set the question of the muscularity of the urethra finally at rest."

Both surgeons agree as to the safety and expediency of treating stricture, where practicable, by dilatation, but in operative procedure for the relief of organic stricture, they differ.

With regard to Syme's perineal section, Sir Henry Thompson says: "That is very seldom done now. It was much done twelve or fifteen years ago, but other means have superseded it. Occasionally the operation is still performed, chiefly when there are perineal fistulæ, which require to be laid open." But with regard to the internal division of stricture by the urethrotome: "In my own experience of sixteen or seventeen years of these operations, I have never lost a case of internal or external urethrotomy, either in hospital or out of it, and I have had a great many cases; I can not say how many, perhaps a hundred."

Sir Henry Thompson says: "Now, for internal urethrotomy in these cases of stricture in the bulbus urethra, this instrument of Civiale's, which I hold in my hand, is a very good one. I used it for a case here about a month ago, and the result was simply perfect."

Speaking of the above operative procedures, Erichsen says: "The first of these operations introduced by Mr. Syme as urethrotomy, and commonly called the *perineal section*, is a comparatively simple procedure"; and of Civiale's internal division of stricture: "The internal division of stricture has always been a favorite method of treatment in France, and of late years not a few complicated and dangerous machines have been invented. Such contrivances are only mentioned, in order to be condemned as in the last degree dangerous and improper."

When cross lights shine upon a subject from such luminaries, where are we, poor farthing rush lights, to illume our tapers?

Sir Henry Thompson evidently regards internal urethrot-

omy as simple and safe; Dr. Mastin, of Mobile, coincides. But although one swallow does not make a spring, the following case will go to prove that Erichsen's fear of these internal contrivances was not unfounded:

CASE I.—J. B., about forty-five years of age, with constitution pretty well shattered by early dissipation, fell under my care for an old stricture of bulbous portion of urethra, just anterior to membranous portion. The stricture was of years' standing, and when I saw him, was complicated by chronic inflammation of the bladder, with dark-brown urine. When first seen, the stream of urine was small and exhibited little expulsive force of the bladder. The stricture was permeable to a small catheter (No. 2 or 3), which was passed once or twice a day without any sensible dilatation of the urethra, but producing the much ridiculed "spasm" of the strictured part. After a week or ten days, the stream became nothing more than a dribble of drops, with considerable distension of the bladder, and a good deal of suffering. An attempt was made to pass the catheter by myself and a medical acquaintance, who enjoyed considerable reputation as a skillful surgeon, but in vain, the stricture would not admit the catheter. My medical confrere suggested a very easy way out of the difficulty—the section of the stricture by urethrotome as a perfectly easy and safe procedure, as it was evident that the point of the catheter was grasped by the spasmed stricture. I having no experience with the instrument, he offered to officiate. The urethrotome was procured, passed down to the stricture, pressed into it as far as gentle pressure would carry it, the blades extended, the stricture apparently cut, and the instrument to all appearances glided into the bladder. It was then withdrawn, and followed by a tolerably free flow of urine. The gentleman officiating pronounced the stricture cut and the patient relieved, boxed his urethrotome, and departed.

The next day the stream gradually diminished, and by the afternoon no urine would flow. The catheter was passed and apparently slipped along the passage with little difficulty, but

no urine followed. The catheter did not sink down between the thighs as when entering the bladder, and upon being withdrawn, pus was observed in the eye of the instrument. I had a very nice little case before me—an impermeable stricture, a false passage, entire stoppage of urine, and a bladder disorganized by chronic inflammation. I did not send for my friend with the urethrotome, but put J. B. on a table, secured as for lithotomy, groped after the stricture with a sound passed into the urethra, and cut down through the raphe between the rectum and bulb of the urethra, and divided the stricture on the point of the sound, cutting through a part of the membranous portion. Great difficulty was experienced in passing the catheter into the bladder, owing to the false passage and the perineal incision, the point of the catheter finding its way more easily into these passages than into the urethra; but with the help of an experienced friend the passage was finally found. The false passage made by the urethrotome had passed up between the bladder and rectum. Fortunately, no infiltration of urine occurred. The wound in the perineum healed kindly, and the stricture, as far as I could learn, did not return.

Says Liston: "Of all operations in surgery, there are none so difficult, none which require so much patience and care as passing a catheter through an obstinate and very narrow stricture."

Says Professor Syme: "That whenever urine passes outward through a stricture, an instrument ought, with care and perseverence, to be got in."

Says Sir Henry Thompson: "Under no circumstances whatever should force be used in the introduction of an instrument through a stricture into the bladder. That is my dictum today."

High authority pronounces the presence of three or four strictures in the same urethra at once as rare.

CASE II.—J. K., a stout man of forty years of age, engaged in planting, just recovering from an attack of jaundice, placed himself under my professional care to be treated for stricture.

His account of himself was, that he had freely indulged his venereal appetite, and was fond of whiskey; had gonorrhœa several times. That finding some months before his stream of urine was diminishing, and that micturition was accomplished with considerable pain and effort, he had twice visited Professor Chisolm, then in Charleston, who failed to pass a catheter into his bladder; that Professor Chisolm leaving for Baltimore, he had applied to me.

Upon attempting to pass a catheter, I found within an inch of the meatus a stricture admitting the passage of a small catheter; about two or three inches behind this I came upon another stricture, through which I could not pass the smallest instrument. The patient's bladder being in pretty good condition, I persevered in my efforts every day or two, using no force, but all the gentle insinuation I was master of. Although much annoyed by the irritable stricture near the meatus grasping tightly the catheter when first passed through it, I persevered, and at the end of about two weeks entered the second stricture; but the passage caused severe rigors, with an escape of some blood from the urethra. The instrument, upon second insertion into second stricture, was left in for some hours. Upon an attempt being made to pass it on, I met with a third stricture a short distance behind, which I got into after another two week's siege, accompanied again by rigors and an escape of blood from the urethra; and came down upon a fourth stricture, which, at the end of six weeks from the commencement of the treatment, I succeeded in passing and entering the bladder. Treatment by dilatation was persistently practiced, and in due time the patient was able to pass for himself a No. 9 or 10 catheter. When last seen, more than a year after treatment, the cure continued, there being no return of stricture, the parts being kept open by occasional passage of the catheter.

The conclusions I have arrived at from my limited experience are—1. If there is no such thing as a purely spasmodic stricture, that organic strictures are irritable at times, and that the canal narrowed by deposit of plastic matter can become

further narrowed by spasmodic contraction caused by an irritable condition. 2. That there are very few strictures, uncomplicated by stoppage of urine, that can not be overcome by patient effort at dilatation. 3. To be chary of using the knife internally or externally, and never internally when the stricture is impenetrable to an instrument; and that it is better to cut down upon the head of a sound through the perineal structures, than blindly to push a cutting instrument through an impenetrable stricture.

ECLECTIC DEPARTMENT.

"Carpere et colligere."

ART. I.—REPORT OF DR. E. T. WILKINS UPON THE PROSPECTED NEW STATE ASYLUM IN CALIFORNIA.

The report of Dr. E. T. Wilkins, appointed a commissioner, under an Act of the Legislature of California, to visit the principal insane asylums of the United States and Europe, and report upon their management and the different modes of treatment of the insane adopted therein, together with statistics of insanity, has been published, by order of the Lagislature, lately in session in Sacramento, and now lies before us. The report appears to be, to a certain extent, a sort of treatise on this subject, addressed to ignorant members of the Legislature, and intended to enlighten their intellects on the matter of the prospected new State Insane Asylum. Full information is given upon all the points necessary to be understood for the selection of a proper location therefor, quantity of land required, and character of the same as affecting hygiene, drainage, and facilities for cultivation, accessibility from those portions of the State that yield the greatest number of insane, and most required asylum accommodations, internal organization and management, economy of administration, and plans, speci-

fications and descriptions of some of the best asylums in the United States, Great Britain and Europe. The chapter on Treatment of Insanity gives a fair view of the methods most in use in the different forms of the disease, particularly among American and English alienists. The statistical tables in the appendices are very full and valuable to physicians for reference, but the portion of the report which constitutes a history of insanity from the earliest ages, and a treatise on the psychical aspects of the subject, might have been omitted as somewhat out of place, besides being better elucidated in many text-books and monographs. An analysis by Dr. Moxet, Secretary of the Medico-Psychological Society of France, of the work of M. Legoyt on the Statistics of the Insane, is of great value and interest; it is given entire, excellently translated from the French by Miss M. W. Sawyer, Harrison Square, Massachusetts. The "Report of Lunatic Asylums," by Dr. F. Norton Manning, made to the government of New South Wales in 1867, is freely used and quoted from; indeed, Dr. Manning treats most admirably upon all the more important of the topics embraced in the present report, and his book will long remain a standard work of reference in the English language.

On the subject of separate asylums for chronic and incurable cases, Dr. Wilkins states that of the superintendents of insane asylums whom he met in his investigations, "about one-fourth of those in Italy, one-half in Austria, Moravia, Bohemia, Saxony, and a few others of the German States, perhaps a tenth in other continental countries, and one in twenty of those in Great Britian and the United States, were in favor of separation, while all the rest were opposed to the principle and the practice." The segregation in separate asylums of those deemed incurable deprives these unfortunates of the last gleam of that hope which is for the insane frequently the most efficient means of cure; and such segregation, doubtless, of itself, is enough to render many cases truly incurable. It has frequently happened that lunatics considered to be hopelessly crazy, have escaped from the asylums where they were confined, and being

so fortunate as to avoid recapture, have recovered their reason under the buoyant influence of freedom from discipline and confinement, when a continuance in the asylum would have been equivalant to life-long insanity. This is not by any means to say that asylums are injurious or useless institutions; on the contrary, in the very great majority of instances of acute insanity, the surest, often only hope of cure, lies in prompt removal of the patient from the scenes and incidents of daily life, amid which the disease has made its onset, and subjecting him to the influences of the, so to speak, mechanically regular mode of existence that obtains in a well-managed asylum, with its freedom from avoidable disturbances, its moral atmosphere of quiet discipline and habitual obedience to an intelligent, kindly head, and its soothing, yet, so far as possible, cheerful *entourage*. But all this good is not without a sombre aspect. Asylums are essentially prisons; their attendants are jailors, frequently ignorant, and cruel through ignorance if not by nature, and too often fond of exercising unneccessarily the little brief authority they possess; and the great improvements of modern times in their construction, surroundings and management, consist in hiding this their unpleasant aspect, and by kind treatment, regular and pleasant occupations, cheerful amusements and interesting studies, reconciling their inmates to the inevitable consciousness that they are prisoners. After a certain length of time, varying in different cases, almost all inmates of asylums who have any considerable degree of intellect left, and some who have very little beyond the memory of former times, become tired of their routine mode of existence and long for the change and freedom of the outside world. This sometimes acts as healthy stimulus and facilitates and hastens a cure, and it sometimes has the opposite effect, depriving of hope and depressing. But still, simply because they are insane (except in the case of dangerous and suicidal lunatics), these are kept locked up, deprived of liberty, the chief thing that makes life worth having. It may have been that in the acute stages of the disease, the asylum was the place for them; or it is, for

their friends (?) an easy mode of getting rid of them; or convenient on grounds of economy; or perhaps it may be taken for granted that this imprisonment is never an injustice to one distraught of his reason. But surely none of these considerations afford good grounds for keeping an insane person in confinement until cured, or, if incurable, a perpetual prisoner. Perhaps the next great advance in the treatment of the insane will be the setting free of those whom asylum life no longer benefits, admitting them to the incalculable curative influence of constant association with those possessed of their reason, and the educating the world at large to the knowledge that a lunatic is not, simply because he is a lunatic, to be feared and avoided, but that he is, even more than any other one stricken with disease, to be pitied and helped onward to health by kind ministrations and human sympathies. Treatment by the restraints of straight-jackets, hand-cuffs, coërcion chairs, has of late years been vastly curtailed; perhaps the restraint of the asylum itself may be doomed to a similar abridgment.

If it is undesirable that chronic and incurable cases should be kept in asylums devoted to this class only, the same can not be said of the criminal insane—criminals who have become insane while confined in prison. The great majority of these, coming from the lower strata of society, are degraded and repulsive, and it is an injustice to those already so unfortunate as to be afflicted with mental alienation, often having abnormally keen sensibilities, to thrust into their companionship these criminals—the moral influence upon the former can not fail of being bad, both directly and in its direct assault upon that feeling of natural self-respect, to foster which is so important a part of the moral discipline of the insane. Dr. Wilkins' reasoning upon this branch of the subject is sound and judicious. He recommends the erection, in conjunction with the State Prison Hospital, of a suitable building for the accommodation of this as yet not numerous class. They are still sent, as heretofore, to mingle with the non-convict population of the State Insane Asylum at Stockton.

Another subject, and a very important one referred to by Dr. Wilkins, is the accommodation of paying patients in separate asylums. He says:

"Some eminent men in all the countries we have visited have given as their decided opinion, that patients who pay and those who do not should never be kept in the same asylum, nor placed under the same administration, as the privileges that will be allowed the one, beget jealousies on the part of the other, while the necessities of a crowded asylum often enforce associations that would not be recognized at home, and with all the sensibilities sharpened by insanity, as sometimes happens, disgusts and dissatisfactions are engendered, and detrimental results the consequence.

"What is *best* to be done and what *can* be done are two very different propositions, and in a majority of cases we have to accept the latter. If it were possible, however, there is no question it would be best for each State to furnish one asylum for the accommodation of all of its citizens who desired to pay for accommodations superior to those that can be given to the indigent. These should be charged a sufficient sum to defray all expenses of such an establishment, including officers' fees, repairs, and other expenses, the State only furnishing the buildings. All other asylums should be *free* to every person belonging to the State who might elect to enter them, without the payment of *fee* of any kind. If this system could be adopted, many economical changes might be made in the construction of our asylums, without detriment to any class of patients. An asylum for one hundred patients would probably be sufficient for all of this class now in our asylum, or likely to be committed during the next ten years. It should be as much under the control and watchful supervision of the State officers as the others, and all charges should be regulated by State authority, in order that no person should profit by its operations save and except the patients who paid for the privilege of having more quiet, more comfort, and more attention than the State could afford to give."

A table is also given, showing that the number of pay patients in the State asylum at Stockton was, on January 1st, 1872, only nineteen males and fourteen females; and Dr. Wilkins favors the abolition of all charges as far as relates to citizens of the State of California, until the system he suggests, of a pay asylum, can be carried out. This latter idea, of the abolition of all charges, we do not favor, though the one of a pay asylum we do. Abolition of all charges would keep out of the State asylum a number who now enjoy and require its benefits; and even after the establishment of a pay asylum the reception of pay patients by all the asylums of the State ought to be allowed, thus giving a desirable option of locality, skill, and reputation of superintendent, and ability of management. As for the size of the pay asylum proposed, we do not think with Dr. Wilkins, that one capable of accommodating one hundred patients would be sufficient for the next ten years. Many are attacked with insanity here who, in the present state of social feeling, would be committed to an asylum of the character proposed by Dr. W., but are now sent by their friends to Eastern or European asylums for treatment, partly because of the overcrowded condition of the State Institution at Stockton, partly because the legal regulations regarding pay patients there contemplate only one class of these—viz., those who pay fifteen dollars a month, and proper provision can not be made for such as desire and can pay for treatment and luxuries of a costly character.

No asylum ought to be maintained as a source of profit to the owner or manager of the same, whether this be the State, or a private corporation or individual. The suspicion that naturally attaches to everything that is done and all advice that is given for the benefit of every patient in such an institution, that such acts and advice are to some extent tainted, perhaps unwittingly, by interested considerations, often interferes so materially with carrying out the proper course of treatment, detracts so seriously from the weight of such advice, that both patient and physician suffer. The former does not obtain the

benefit to be derived from a hearty coöperation on the part of his friends in the course of moral treatment prescribed by the physician, often a very material, even essential element of its success; and treatment is often interrupted by the premature removal of the patient from the asylum to his great detriment. The physician suffers in professional character and weight of authority. A pay asylum, such as that proposed by Dr. Wilkins, would, of course, be free from these objections; but even every private asylum, to obtain its maximum of usefulness, ought to be so organized that all its officers and employees would receive only their stipulated salaries, and if any surplus of money remained after payment of current expenses, those for repairs and maintenance of efficiency, and the integrity of a reserve fund for emergencies, this surplus should be returned to the Institution in the shape of improvements for the benefit of all of its inmates. If asylums were the opposite of what they are, and intended for the treatment of reasoning beings capable of judging what is for their benefit, the decision as to course and duration of treatment would properly be left to the patients themselves; but as it is, the decision is to be made by ignorant and suspicious friends, or by interested physicians; not a fair thing. The physician should be not only an entirely disinterested party, except professionally and scientifically for the sole benefit of the patient and of science, but he should be even above the suspicion of a pecuniary interest in continuing the treatment. Then his opinions would command respect and carry their proper weight.

A very important subject, one not considered by Dr. Wilkins, is the proper mode of committal of the insane to the confinement of an asylum, and their supervision while there by State or judicial officers. The law upon this subject in California provides, that upon affidavit before a county or probate judge that so-and-so is insane, and by reason of insanity dangerous to be at large, the person so accused shall be examined by the said judge and two regularly educated graduates in medicine, to be appointed by the judge, who shall together take sworn

testimony in the case, and upon the sworn finding of these physicians that the accused is insane and dangerous to be at large, he is committed by the judge to the State asylum, and there he passes from public or official observation. By the elastic stretching of the provisions of this law, all kinds and degrees of insanity find their way for treatment to the public asylum. The law is imperfect and ought to be amended. It should provide for the committal of all insane needing asylum treatment, not simply those dangerous to themselves or others. It ought to allow of the committal of the lunatic to any asylum in the State, public or private, which the friends of the patient may prefer, unless good and sufficient reason can be shown for disregard of this preference by the magistrate making the commitment. The power to commit ought to be vested in all State judicial officers, not restricted to probate and county judges, as emergencies might arise, particularly in extensive or sparsely settled counties, necessitating immediate placing of a patient in an asylum, when neither probate nor county judge might be accessible—and no person ought ever to be subject to the confinement of an asylum except on commitment by a magistrate under certificate of insanity sworn to by at least two competent and respectable physicians. Provision ought also to be made by law for the regular supervision, by commissioners appointed for the purpose, over all insane persons in the State subjected to restraint, whether in public or private asylums, or general or special hospitals, or private houses, and of these commissioners a majority should consist of competent physicians and a minority of qualified lawyers. These commissioners should have authority to order discharged from confinement or restraint any insane person not requiring either. We regret Dr. Wilkins has not discussed these topics in his report, within whose scope they fully fall, as his judgment upon practical questions appears very sound and reliable, and such recommendations as he might have made would have had considerable weight with the Legislature.

The report refers to the propriety of giving instruction in

psychology and psychiatry in all medical colleges. This is now generally conceded, and in some of the leading institutions of the kind in this country, special professorships for this purpose have been instituted. Not only thus will the interests of the insane and the science and art of mental pathology be improved, but as the study of pathology and rational therapeutics have been powerful factors in developing the science of physiology, so the investigation by every student of medicine of the phenomena of insanity will lead to a wiser mode of research and a continual approach to perfection in the science of mental philosophy; for it is only to a proper physiological objective method of investigation of the phenomena of mental operations that we are to look for any true advance in psychology, the most important to humanity of all the brotherhood of the sciences. In the words of the motto inscribed by Sir William Hamilton on the walls of the class-room of Logic and Metaphysics in Edinburgh: "On Earth there is nothing great but Man: in Man there is nothing great but Mind."—*Western Lancet.*

NOTE.—Superintendants of asylums, private and public, will please criticize this paper; discussing concisely the great questions therein presented, and sending their criticisms to this Journal for publication.—E S. G.

ART. II.—TWO CASES OF LUXATION OF THE ELBOW BACKWARDS—ONE OF FOURTEEN WEEKS, THE OTHER OF SIXTEEN WEEKS' STANDING—REDUCTION BY THE AID OF SUBCUTANEOUS SECTION OF THE TRICEPS TENDON—RECOVERY. By LEWIS A. SAYRE, M. D., of New York. [Paper Read before the New York State Medical Society.]

CASE I.—Ricardo Gibbs, aged five years, native of Cuba, came to me on the 9th of August, 1867, with a luxation of the forearm backwards, the result of a fall received fourteen weeks previously.

The limb was very nearly straight and fixed at the joint, no

motion being manifest. Several attempts had been made in Cuba to reduce it, but they were all unsuccessful. Col. L. Lay, of Havana, then sent him to me, and after a careful examination of the case, I decided that it was worth a trial, although the fibrous adhesions were so firm as to give it the appearance of bony anchylosis. Drs. F. Hamilton and J. M. Bush, of Kentucky, were called in consultation, who both agreed with me as to the propriety of attempting the reduction.

The boy was perfectly anæsthetized with chloroform, and I made vigorous efforts at reduction by flexion and extension for nearly half an hour, without any manifest change in the position of the bones, although I succeeded in breaking considerably the fibrous adhesions. Dr. Hamilton then tried the reduction, but without any better result than my first effort. I made another attempt, and finding that I could not succeed unless I fractured the olecranon, I requested Dr. Hamilton to divide the triceps tendon subcutaneously, which he did, while I made it tense by very strong flexion, and in a few minutes I succeeded in making the reduction perfect and complete. The elbow was secured at a right angle with "Ahl's Felt Splint," and kept wet with an evaporating lotion. The advantages of these splints over all others, that I have seen, in cases where we wish accuracy of adjustment with permanency of retention, and at the same time wish to keep the parts wet with lotions, either hot or cold, without any danger of their change of form or position, can only be appreciated by those who have practical experience in their application. In this case it was retained on the arm for several days without the slightest change in position, although saturated with the lotion all the time, and gave the greatest possible comfort to the patient.

Two days after the operation the arm was much swollen and greatly discolored, from the extravasated blood; but it gradually subsided, and on the tenth day the swelling had almost entirely disappeared, but the discoloration lasted for some two weeks.

After the tenth day the splint was removed daily, and passive

motion given to the joint, with friction to the arm and forearm; and on the twentieth day from the operation, the flexion and extension of the elbow could be made complete and without any pain whatever.

There was very little voluntary power over the brachialis anticus muscle, and electricity was applied to it and the biceps flexor. This was continued every other day for two months, with friction and passive motion to the joint, by which time he could flex his arm to a right angle, could tie and untie his cravat, and extend his arm nearly straight.

He then left for his home, and I have not seen him since, but have learned from his father, a few months since, that the motions of his elbow were as good as that of the other.

CASE II.—On the 7th of December, 1870, Dr. E. S. Dunster sent to my clinic, at the Charity Hospital, a lad aged thirteen years, who had a luxation of his elbow backwards of thirteen weeks' standing, and had been treated by a druggist in the country, by a straight splint, and, of course, his arm was quite firmly anchylosed in a perfectly straight position.

Dr. Dunster had tried, a few days before, to reduce the luxation, but without success, and sent him to me for another effort, if I deemed it advisable.

The joint was so inflamed at the time from the result of this effort, that I was afraid to attempt it, and advised the application of ice-bags until the inflammation should subside. He was presented again on the following week, and while examining his arm, and before any attempt was made to reduce the luxation, he swooned, and was revived with great difficulty. The boy was anæmic from starvation, and the bruit in his neck was like that of a chlorotic. As any anæsthetic in his present condition was dangerous, and as it was impossible to perform the operation without it, he was advised to wait until his general health improved, and for that purpose he was put upon a nutritious diet, with a full allowance of iron and quinine.

Some doubts having been expressed as to the propriety of attempting the reduction, I called a consultation on the 22d of

December, Dr. Hewett, formerly Surgeon U. S. A., who advised resection, and some of the other gentlemen also advised this course. Dr. Mason detected the fracture of the coronoid process which had become attached to the anterior portion of the condyle of the humerus. The arm was *perfectly straight*, and admitted of only the slightest possible motion. After carefully weighing all the points in the case, I decided not to resect it, as it might be followed by tedious suppuration, and his condition was too feeble to take that risk.

Resection of a joint that has been a long time inflamed, and where the periosteum has become thickened and will readily peel from the bones so that you can make the resection *subperiosteally*, is a very easy matter; but when the bones are in their normal condition, it is impossible to detach the periosteum, except in shreds; I therefore decided to attempt the reduction, and, should this prove impossible, I would then fracture the olecranon and take my chances for motion; at all events, have recovery with the arm anchylosed at a *right angle*, which would make it much more useful than in its present position.

He was fully anæsthetized by ether, and with considerable force I succeeded in breaking up the adhesions and flexing the arm to an angle of about 135 degrees, when I was checked by the tension of the triceps, and fearing that the olecranon would fracture if any more force was used, I requested Dr. Mason to divide the triceps, which he did subcutaneously, and almost instantly the forearm was brought to a right angle with the arm, when it was checked from any further flexion by the coronoid process which was attached to the anterior portion of the condyle of the humerus. By using the forearm as a lever, and with considerable force, I fractured off this attachment and succeeded in flexing the arm to an angle of forty-five degrees. The arm was secured in this position and treated the same as in the first case. Very little inflammation followed, and, at the end of a fortnight, passive movements were commenced, and I was informed yesterday by Dr. Dunster that he has every pros-

pect of recovery, with very good, if not perfect motion. The dislocation has lasted sixteen weeks, lacking two days.

Gross, vol. 2, page 144, says: "The reduction of this dislocation is extremely easy, if attended to immediately after its occurrence, but very difficult if it be neglected even for a very short time. Upon this subject there is no difference of sentiment among practitioners, writers and teachers. My experience in regard to it is ample, and in perfect accordance with that of the Profession generally. I have no recollection of ever being foiled in my effort in a solitary instance of recent dislocation of the elbow joint, while I can call to mind a large number of cases where everything that could be done proved unavailing after the third week, and sometimes even by the end of the second. I am not prepared to assign any reason for this, to say why displacement that is always so easily rectified, if properly managed in its early stages, should so soon become utterly resisting and defying all the best directed efforts of the surgeon."

These two cases show that we may sometimes be successful even after a longer period than three weeks, and therefore justify the effort. That there was a fracture of the coronoid process in this case, there can be no possibility of a doubt, its crescentic edge could be distinctly felt on the anterior surface of the condyles of the humerus, to which it had been quite firmly attached, and when the forearm was strongly flexed, it was fractured off with a very distinct snap that was clearly audible to the entire class. The olecranon was not fractured, nor was any other bone, and therefore this distinct noise of fracture must have been made by the fracture of the coronoid from its new attachment.

Hamilton, in his work on fractures (Ed. 1863, p. 267 *et seq.*), says: "Dissections have established the possibility of this fracture as a simple accident in the living subject, but I have not, myself, seen any example of which I can speak positively.

He relates two cases in which the existence of such a fracture was at first suspected, but in regard to which he after-

wards had very little doubt that his diagnosis was incorrect.

After analyzing the reported cases, he concludes: "The fact, therefore, that so few cases have been reported, and that most of these are far from being clearly made out, remains presumptive evidence that the actual cases are extremely rare; but, if to this we add such negative evidence as is furnished by actual dissection and examinations of the pathological cabinets of the world, we think the testimony almost conclusive. Only four specimens have been mentioned by any of the surgical writers known to me." These four he shows to be not altogether satisfactory, and concludes: "We are therefore left as before, with no evidence that the coronoid process was ever broken by the action of the muscle, and with only one example in which it is probable that a fracture occurred as a consequence of a dislocation of the radius and ulna backwards." The last one of my two cases, I feel confident, can be added to his list.

Dr. Mosely, Demonstrator of Anatomy in Bellevue Hospital College, showed me a specimen, a few days since, which he obtained in the dissecting-room, in which there was distinct fracture of the coronoid process and union by ligamentous junction.

Dr. Darling, Professor of Anatomy in the New York University, has another specimen which was presented to him by Dr. Bradley, of this city, which is almost the exact counterpart of my second case, luxation of both bones backwards, and fracture of the coronoid process, which had become anchylosed to the anterior portion of the condyle of the humerus.

The variety of this accident, according to Hamilton, and the difficulty of its treatment, according to Gross, and which, in this instance was so perfectly successful, has appeared to me a sufficient reason for placing the facts before the Society for permanent record.—*Western Lancet.*

ART. III.—RUPTURE OF THE UTERUS—NEW SYMPTOM. By ROBERT J. PRESTON, M. D., Abingdon, Va. [Read at the Fifth Annual Session of the Medical Society of Virginia, October 14, 1874, and Requested for Publication by the Editor.]

Rupture of the uterus, it has been justly said, is one of the gravest accidents which can occur during the progress of labor. The following fatal case in my practice is now reported for the purpose of calling attention to a new symptom, not generally mentioned in obstetrical works, and which was not recognized by me at the time, and, consequently, its significance was not appreciated, else the life of my patient might probably have been saved.

M. W., a mulatto, aged twenty-six years, was taken in labor with her third child, November 4, 1872. There was a slight watery discharge at 10 A. M. Being called at 3 P. M., I found the patient complaining of flying pains in the back, which began some hours previously, and had gradually increased in severity. On vaginal examination, the os was found but slightly dilated, head presented in the first position, and labor hardly commenced. I prescribed morphiæ sulphatis, gr. ¼, to be repeated after proper interval, if necessary, and left with instructions to send for me as soon as labor pains occurred.

November 5th.—Called at 4 A. M.; labor but slightly advanced, though the pains were somewhat increased in frequency and severity, and the os was dilated to the size of a quarter of a dollar. Patient had slept some. During the examination at this time, a small tumor, of a cushion-like soft feel, was discovered just below the utero-vaginal junction occupying the right latero-posterior aspect of the vagina. Some suspicion of pelvic hæmatocele was felt at the time; but the swelling being insufficient to interfere with the progress of labor, the pelvis large and capacious, and the previous labors having been short and easy, no special attention was given to it. I remained till 6 A. M., and observed that the os, which was soft and dilatable, slowly responded to the feeble pains. I directed some aromatic

teas (spice and pepper) to be given and continued, with nourishment.

8 A. M.—Patient in much the same condition; pains feeble and infrequent, head slowly advancing into the hollow of the sacrum, os dilated to the size of a Mexican dollar, and very dilatable; vaginal swelling disappeared. Presuming that the pains were so feeble and ineffectual on account of inertia of the uterus, I administered ergotine gr. ¼, which was repeated at 9 A. M., but without producing any apparent effect upon the frequency or strength of the pains. The head advanced very slowly, and as the patient became restless and fatigued, coffee and nourishment were given at intervals. The beat of the fœtal heart was clear and distinct, and no obstacle to the easy progress of labor could be detected, except the want of strength in the uterine pains.

At 11 A. M., the os was almost fully dilated, head in the hollow of the sacrum. I determined to use forceps, and accordingly dispatched a messenger to town (one mile) for them, and for consultation. There was nothing in the pulse or in the condition of the patient indicative of exhaustion, except restlessness and fatigue; so I encouraged her by saying the labor would soon be ended, gave more nourishment, and retired to an adjoining room to read the morning papers.

Nothing unusual transpired until near 12 o'clock, when I was startled by the sudden cry of pain. On hastening to the bedside, expecting to find that the child's head had passed over the perineum, much to my horror I found my patient with the most alarming symptoms of shock, pulse faint and small, countenance pinched and pallid, and with severe lancinating pain in the right side of the abdomen. On vaginal examination, the child's head had receded beyond the reach of my finger, and some blood was discovered in the vagina. I now recognized that the terrible crisis of a ruptured uterus was upon me, and so stated to my patient and her friends. The increasing pallor of countenance and feebleness of pulse admonished me that my patient, just before a buoyant and robust female, was

now rapidly sinking into the jaws of death. No anæsthetic was at hand; but while the nurse administered stimulants freely, I proceeded to perform version as rapidily as possible. Passing my hand and arm into the vagina, and through a large rent into the abdominal cavity, among the intestines, with some difficulty I secured the right foot and leg of the child and brought them down. Considerable delay and trouble were here encountered on account of the child's left hip and leg hanging at the superior strait, until finally I returned the limb, which had been brought down, into the cavity, when I secured both feet, brought them down, and in a short time succeeded in delivering the body as far up as the shoulders. These having caught at the superior strait, presented another difficulty, while, from the labor of the operation thus far, together with the mental strain and anxiety consequent upon a crisis so terrible, I was much fatigued. At this juncture, Dr. E. M. Campbell arrived with instruments, and rendered very efficient and welcome aid and counsel. After much toiling, the arms of the child were delivered, and we proceeded to deliver the head; brandy and camphor being freely given the patient, as her strength was sinking rapidly. The head was large, and before we could succeed in entirely extricating the child, death came and stopped us in this terrible and unfinished operation.

We were permitted by the friends to open the abdomen for the purpose of completing delivery. The uterus was found to be torn vertically for about five inches along its posterior wall, extending into the vagina. The placenta and membranes were detached and lying in the left side of the abdominal cavity, in a large amount of blood, liquid, etc.; the fundus of the uterus, firmly contracted, was lying upon the opposite side. To the naked eye, no signs of disease in the uterine tissues were observable. I regret that we could not carry the examination further, so as to determine more accurately the condition of all the parts.

In searching medical literature afterwards upon this subject, I found in the "American Journal of Obstetrics," May, 1869,

p. 144, a New Symptom of Rupture of the Uterus, described "as a voluminous tumor just above the pelvis, resembling the distended bladder, but more clearly defined, appearing to be filled with a gelatinous mass." This was observed by M. Jolly in a case at the Maternité, in Paris, in 1867, though he observed nothing else indicating rupture or perforation of the uterus—both of which probably existed at the time, as after the performance of version and the extraction of a dead child, these lesions became manifest. Autopsy revealed a small circular perforation of the left side of the neck, just below the os internum; also a larger rupture of the anterior wall of the neck at the same height, having a transverse direction, five or six centimetres in length, opening into a large sub-peritoneal cavity which contained black clots, and corresponded to the supra-pubic tumor noticed during life. M. Jolly reports one or two cases illustrative of this new symptom; and Hecker simultaneously confirms its value, and says it may obtain either in the hypogastric region, in the groin, or in the vagina.

The usual symptoms as given by authors are profound shock, hæmorrhage, sudden cessation of uterine contractions, severe lancinating pain, recession of the presenting part, etc. Of these, sudden cessation of uterine contractions occurring during labor is considered by modern authorities as almost pathognomonic, and is the symptom above all others looked for in these cases. But continuance of contractions in a ruptured uterus does sometimes obtain, as well authenticated cases prove. When such is the case, and the other symptoms are wanting or not marked, the diagnosis is necessarily obscure, which, by giving the obstetrician a false sense of security, may delay him in the employment of the means to ward off a fatal issue. "It is no rare occurrence," says Robert Collin, "that the contractions continue in cases of slight rupture." According to Ramsbotham, "if an extensive rupture occurs, it is probable that the contractions will cease immediately, but that they will continue for some time if the rupture be a small one."

How, then, are we to diagnose these slight ruptures or per-

forations? It is in these cases, which, unusual as they may seem, are nevertheless of pretty frequent occurrence, that this new symptom—the sub-peritoneal tumor appearing in the hypogastric region, in the groin, or in the vagina—becomes unquestionable and of great value, as indicative of this initiatory lesion or perforation, and as premonitory of an impending crisis more terrible; but which may be averted by the immediate and timely extraction of the child and its appendages. In the case above reported, the swelling in the vagina, discovered some eight hours before the fatal issue, was undoubtedly a tumor of the character described—a sub-peritoneal effusion from slight rupture or perforation of the uterine tissue; and had its significance been appreciated by me at that time, and the immediate extraction of the fœtus and its appendages been procured, the fatal issue might probably have been avoided. It is useless to say that, under the circumstances described, no ergot, even tentatively, should have been given.

The question arises, too, *after* the final rupture and escape of the child into the abdominal cavity, in the case I have just reported, whether abdominal section would not have been the better operation? Had the operation been performed at once, I think that the life of the child might have been saved, and that the mother would have been given an equal, if not a better chance of escape from death, by the opportunity which would then have been presented for washing out the abdominal cavity and securing the bleeding vessels at once. But with the weight of authority against such a procedure, it would be difficult indeed to incur such a weighty responsibility without consultation.

In the "Histories of Three Cases of Rupture of the Uterus," read by Dr. John S. Parry before the Philadelphia Obstetrical Society, April 3, 1873,* attention is called to an extremely interesting point in one case—viz., "the appearance of a fluctuating tumor over the pubis before the death of the pa-

* American Journal of Obstetrics, No. 22, p. 188.

tient"; and the writer continues, "*so far as we know, this has never been noticed in connection with rupture of the uterus.*" In this case the supra-pubic tumor was noticed some hours before death, and some hours before the application of the forceps (the continuance of uterine contractions being kept up), but its significance was not appreciated until post-mortem. The delivery by forceps doubtless prevented a complete rupture; but the patient died soon afterwards of peritonitis.

This new symption having been demonstrated by M. Jolly in 1857, and confirmed by other observers, will doubtless be noticed more frequently in the future; and when recognized and appreciated fully by the Profession, may, it is hoped, by bringing about timely interference, serve to ward off the fearful accident of uterine rupture.— *Va. Med. Monthly.*

ANALYTICAL DEPARTMENT.

"Qui e nuce nucleum esse vult, frangit nucem."—PLAUTUS.

Treatment of Rectal Fistula by the Elastic Ligature. By Dr. Ventura Romanin, of Trieste.—In the majority of cases of rectal fistula, the simplest, and probably the most painless method of cure is by incision. There are three classes of cases, however, in which this method has been superseded. Firstly, those in which the fistula extends so high up the rectum that division with a bistoury may give rise to dangerous hæmorrhage; secondly, a rapid increase of an existing pulmonary tuberculosis, or even acute symptoms of commencing miliary tuberculosis have been observed in cases in which a long-standing fistula has been subjected to incision; and thirdly, there is a class of persons having such a horror of the knife, that they will gladly submit to any amount of pain if they can only escape this, to them, so terrible an instrument.

To test the value of the elastic ligature recommended by Pro-

fessor Dittell, all cases of rectal fistula, except the smallest and most superficial, were treated after this method. A hollow sound was introduced into the fistula, and the end brought out through the anus. When no internal opening existed, the mucous membrane was perforated by the sound. A gum-tube about the size of a quill was then introduced through the eye of the sound, and the latter withdrawn. The gum-tube was then tightened and tied.

Six cases were treated upon this plan. The ligature cut its way out in from six to eight days. In one case in which the sound had perforated the rectum at a depth of four inches, the pain lasted three days; in all the others it ceased in a few hours. Two sitz-baths were taken daily while the ligatures remained *in situ*. No dressing was applied. After the ligature dropped off, a fine granulating surface remained, which was frequently touched with nitrate of silver, and in a few weeks healed completely. In no case did symptoms of tuberculosis make their appearance after the operation; in two cases in which it existed, no aggravation of the symptoms was observed.

To those practitioners who do not possess an écraseur or galvano-caustic, or who from want of practice hesitate to use the knife, this method commends itself by its eminent simplicity and absolute safety.— *Weiner Med. Wochenschrift.*

On the Radical Cure of Hydrocele by Electro-puncture.— Dr. Erhardt claims to have achieved a permanent cure in four cases of hydrocele treated by the interrupted current. He combats the statement of Du Bois Raymond, that only the constant current is applicable in electro-puncture. In the treatment of hydrocele, he had always used the interrupted current with perfect success.

The terminals of both poles are inserted into the fluid. The electrolytic action no doubt depends upon the decomposition of the water.

In three cases in which the affection had only existed a short time, and puncture had never been performed, resorption fol-

lowed in from three to five days without reäction. In the fourth case the hydrocele had existed eight years, and puncture of the sac was frequently necessary. The time required for complete resorption in this case was three weeks.—*Memorabilien.*

Effect of Sinapisms, Nitrite of Amyl, Ergotine, Chloroform, and Opium upon the Cerebral Blood Vessels.—Dr. Max Schuler ("Berl. Klin. Woch.," "Chicago Jour. Nervous Diseases,") records some experiments demonstrating the action of sinapisms on cerebral circulation. He experimented with rabbits; the dura mater was laid bare, and through it the circulation of the pia mater could be distinctly observed. He found that *after* the *continued application of large sinapisms* the *cerebral vascularity* was *reduced.* When the greater part of the abdomen or back was covered with mustard, the frequency of respiration increased at first with the pulse, while the vessels of the pia mater dilated regularly as its first influence began to be felt. Soon the calibre of the vessels began rapidly changing; a rapid contraction generally following the previous dilatation, lasting for a time, while the pulsations of the vessels became more and more indistinct, until an equally sudden dilatation supervened. These changes continued for about ten minutes, gradually diminishing, leaving at last the vessels in a state of permanent contraction; the brain accordingly depressed; the frequency of respiration fell in one-half hour one-half; the pulse retained its frequency for rather a long time, being reduced in one-half hour only four or five beats in one-sixth of a minute.

After half an hour the mustard was removed and the skin washed; the integument was reddened and tumefied. On cutting into it the subcutaneous tissue was found œdematous—tumefied into a tough gelatinous mass—its vessels and those of the corium, bleeding freely. The cerebral vessels remained contracted after removal of the mustard, sometimes one and one half hours. During this period irritants ordinarily dilating these vessels had little effect.

In explanation of the above phenomena, it is most reasonable to assume that in the beginning of the influence of the mustard, there is a reflex paralysis of the vaso-motor nerves, by an irritation of cutaneous sensitive nerves, whence the moderate dilatation. Subsequently, when relaxation of the cutaneous vessels and hyperæmia of the skin has been induced by the toxic action of mustard, a depletory influence on the cerebral vessels must be the result of this peripheral congestion, while the vaso-motor paralysis has not yet passed off.

Effects of Amyl on Cerebral Circulation.—Dr. Schuler, experimenting with nitrite of amyl, as with mustard, was able to demonstrate the hitherto supposed action of this drug—viz., that it *relaxes* the *cerebral vessels.*

Thus it follows that good results are to be expected from the use of nitrite of amyl in all cases in which there is a morbid contraction of the arterioles of the brain.

Effect of Ergotine on Cerebral Circulation.—Continuing his observations, Dr. Schuler demonstrated that injection of ergotine was followed by a powerful and continued vascular contraction at the place of injection, and in both the arteries and veins of the pia mater.

Antagonism of Ergotine and Nitrite of Amyl.—Dr. Schuler found that ergotine would contract the cerebral vessels when they were dilated to their fullest extent. On the contrary, nitrite of amyl would not dilate vessels contracted by ergotine.

Action of Ergotine on Vascular Muscular Fibre.—Schuler found that ergotine would contract arterioles when the sympathetic nerve supplying these arterioles was divided. Thus we have direct proof that ergotine acts on the muscular fibre of the arteriole.

Effect of Opium on Cerebral Circulation.—It was found that opium produced a primary dilatation of vessels at the place of injection, and of the pia mater. But soon the cerebral vessels undergo a contraction, and the brain collapses. The dura mater is raised moderately by the increased cerebo-spinal fluid. After narcosis a moderate dilatation follows.

Effect of Chloroform on Cerebral Circulation.—It produces a primary contraction of the arteries of the pia mater and subsequently of the veins, with relaxation of the pulse. Soon there follows an increasing relaxation of arteries and veins, and finally an excessive venous stasis amounting to actual "cyanosis." The arteries assume a darker color from the venous character of the blood. The pulse rises somewhat, after a time, to sink again on continued inhalation; but the calibre of the vessels does not change. The admission of fresh air turns the blood red again and changes the calibre of the vessels.

Nitrite of amyl can remove the effects of chloroform on cerebral vascularity in a short time. The arteries dilate, assume their normal color, the veins likewise, the respiration becomes more frequent and unimpeded.

This restoration by nitrite of amyl will succeed even after a very prolonged action of chloroform, though with less vigor. Similar results are obtained after division of the vagus. Neither the action of nitrite of amyl or chloroform on the cerebral circulation is affected by the sections of the vagus.—*Ex.*

The Treatment of Acute and Chronic Bronchitis and Asthma.—Dr. W. H. Spurgin writes to the "British Medical Journal," that he has tried iodide of potassium in the treatment of these maladies in over a hundred cases with almost invariable success; in fact, with such success that patients have expressed themselves by saying, "it has acted like a charm; others have said that no medicine ever had any real effect upon their complaint before. Iodide of potassium has a marked effect upon the breathing, reducing the frequency of the respirations, perhaps overcoming spasms. Almost after the first dose patients have stated that they have felt the medicine touch their complaint.

He usually prescribes it with carbonate of ammonia, and, when the cough is very troublesome, adds tincture of belladonna and ipecacuanha wine.

In one case of very severe broncho-pneumonia he tried iodide of potassium, with tincture of hyoscyamus and ammonia, and the respirations were quickly and astonishingly reduced from forty in a minute to less than half that number.

He adds, in conclusion, that he has purposely given a mixture containing ammonia, belladonna, ipecacuanha wine, spirit of sulphuric ether, etc., without iodide of potassium, without finding much benefit; after which he added iodide of potassium, and found the patient relieved almost at once.

He confidently recommends iodide of potassium as the remedy in these troublesome complaints.—*Ex.*

Ergotin in Croupous Pneumonia.— The well-known contractile influence of ergot upon the vessels—shown by the anæmia of the invisible mucous membranes—led Dr. Wycisk ("Allg. Med. Cent.-Zeitung") to employ it in six cases of croupous pneumonia, and the results were very favorable. In one such case with profuse serous and albuminous expectoration, the latter ceased entirely within two hours after the administration of the ergot of rye in powder, and the coarse rattling rãles in both lungs gave way to the fine crepitation heard in the early stages of the disease. This effect lasted for two days, and at a second and even a third return of the expectoration the ergot was administered with the same good results. None of the other five cases of pneumonia in which the ergot was employed terminated fatally, no residua were left in any; the effect of the ergot in all was to diminish the amount of the exudation and consequently the expectoration. The Doctor, however, would not advise the use of the ergot in large infiltrations, in emphysema, in cases of rupture of cerebral vessels, or in exhausted and decrepid individuals, as it might in such cases prove hazardous.—*All. Wein. Med. Ziet.*

CLINICAL RECORDS.

"Ex principiis, nascitur probabilitas: ex factis, vero veritas."

ART. I.—OBSCURE FUNCTIONAL DISORDERS. By H. M. GAMBLE, M. D., Moorefield, West Virginia.

The following cases are offered with the hope of adding something to the history of obscure functional disorders, often of a most distressing character, dependent upon disturbance of the spinal cord. Whether there is a distinct pathological condition of the cord itself giving rise to the phenomena of "spinal irritation," or whether these phenomena are due to peripheral impressions transmitted by the different excitor nerves to the cord, is a question upon which many eminent men in the Profession are not agreed.

The clinical history of the cases reported below, and the comparative results of the different plans of treatment to which they were all subjected, seem, so far as they go, to sustain the theory of Professor W. A. Hammond, that the essential condition of spinal irritation is that of anæmia.

CASE I.—Miss A., aged twenty-nine, consulted me in October, 1870, about what she described as a singular feeling in her back, between the shoulders, attended with a pricking, tingling sensation. Upon examination, tenderness was discovered over the seventh cervical, and first, second, and third vertebræ. A few days after, she left home to spend the winter in a distant State, and I saw her no more until August, 1871, when she was placed under my care for medical treatment. I then learned from her that in November, 1870, the pain in the back had gradually but steadily increased, and there was great weakness of the muscles of the spine and extremities, rendering any attempt to walk very fatiguing. In December, she had what she described as violent spasms, "writhing from side to side," fainting fits, and inability to sleep.

The following month, in addition to the above symptoms, urinary difficulties manifested themselves. The spasms recurred with some degree of frequency, though with less severity, until

April, when they ceased. In other respects there was no amelioration of her condition.

The above is a brief statement of the facts in relation to her case, as detailed to me by her in the following August.

There was now extreme tenderness of the whole cervical, upper dorsal, and lumbar regions, compelling her to seek relief in the recumbent posture the greater portion of her time. So great was the hyperæsthesia in the cervical and upper dorsal regions, that the slightest pressure was sufficient to produce intense pain; while in the lumbar region, pain was felt only under firm pressure or on percussion being made. The character of the pain was also different; in the former it was sharp, lancinating, and radiating towards the shoulders and sternum; in the latter, dull, aching, and more circumscribed. The eccentric symptoms were also quite marked, such as cephalalgia, cranial and facial neuralgia in an intermittent form, insomnia, tonic spasms of the muscles of the face, back, and extremities, repeated attacks of syncope, more or less complete, anorexia, nausea, several times obstinate vomiting of thin, glairy mucus, with a discharge of similar character from the bowels, acidity of stomach and pyrosis, occasionally a feeling of impending suffocation, infra-mammary pain, aphonia persisting sometimes for several days, numbness and tingling in the extremities, ovarian pain, dysuria, urine depositing heavy sediment of amorphous urates, and at one time complete ischuria from spasm of the vesical sphincter.

It is not to be inferred, of course, that the above-mentioned symptoms were all present at once; but only that they were all exhibited at some time or other during the progress of the disease.

This patient had, for years previous to the development of any spinal trouble, been the subject of severe dysmenorrhœa, as well as of metrorrhagia and menorrhagia; the result, as verified by examination, of chronic corporeal endo-metritis with anteflexion of the uterus. As the consequence of this state of things, not only from direct loss of blood, but also

indirectly from impairment of the nutritive processes, she had been reduced to a degree of extreme anæmia.

It is perhaps impossible to entirely eliminate hysteria as a complication in this case; nevertheless, she is a lady of unusual firmness of purpose and remarkable self-control. The emotional never, under ordinary circumstances, gained the ascendency over the will; and the predominance of the emotional over the will, I take to be an essential factor in hysteria. Certainly, in the absence of any such symptom, no one would be disposed to pronounce such a case one of *pure* hysteria.

Some of the features of that protæan malady, were plainly visible at times, as they are in most cases of "spinal irritation," but that it ever was a predominating element, I can not admit.

The treatment, both local and general, was directed specifically to the cure of this, at least supposed, pathological condition of the spinal cord, and under that treatment she was restored to her usual health.

For some months previous to her return home, she had been treated—upon what view of the nature of her disease I am unable to say—by cold water douches to the spine and active purgation, with the effect of aggravating her sufferings and causing intolerable pain whenever the cold was applied.

For the above, I substituted a plan of treatment precisely opposite. She was immediately placed upon the internal use of pyrophosphate of iron, sulph. quinia, sulph. strychnine, dilute phosphoric acid, and alcoholic stimulants, with as nutritive diet as possible. Bromide of potassium was used to control irregular muscular action whenever occasion required, and never failed to have the desired effect. Hydrocyanic acid was occasionally required to arrest vomiting, and such other remedies were used as the varying symptoms seemed to demand. Counter-irritation was maintained by means of caustic potassa slightly touched on either side of the spinal column. Cloths wrung out of hot water were applied daily to the spine, and the hotter the more grateful; but the cloths were soon abandoned

for the more convenient and elegant india-rubber bags of Dr. Chapman; and here I may observe in passing, that hot applications to the spine during the menstrual periods always had the effect of diminishing the menorrhagia.

Under the above general and local treatment, there were alternations of improvement and relapse until February, 1873, after which time there was a steady abatement of all the symptoms, and in the August following she had so far recovered her health as to be able to enter into the pleasures of society. Her appetite was excellent, the digestive organs restored to healthy action, and the spinal tenderness entirely relieved.

CASE II.—February, 24, 1872, owing to the age and indisposition of her regular medical attendant, I was requested to visit Mrs. V., aged fifty-four, living five miles in the country. I found her suffering most intensely with pain in the bowels, flatulence, and nausea, and vomiting of bilious matter; dyspnœa and pain in the præcordial region. Morph. sulph., grain one-fourth, hypodermically administered, afforded complete relief in a few moments.

January 28, 1873.—Nearly a year afterwards, under similar circumstances as detailed above, I was again called to see Mrs. V., and as there was now every probability of my having to direct the treatment, I determined to make a more critical examination of her case. She was in very much the same condition as when I saw her the year previous, and I learned that the attacks had recurred at intervals of a week or two with indescribable severity, until from a strong and vigorous woman she had been reduced to a helpless invalid. Among the most prominent symptoms were gastrodynia, acidity of the stomach, nausea and vomiting, gastric flatulence, pain in the præcordial region and in the intercostal spaces. There was no cardiac disturbance, but she had been treated very energetically for pericarditis a year or two before she came under my care. Regarding the above phenomena as evidence of altered innervation from centric disturbance, my attention was directed to the spinal cord as probably the seat of her trouble. In reply to

a question, whether or not she ever had pain in the back, she promptly stated that she had not, but when I made pressure upon the spinous processes from the first to the fourth vertebra inclusive, most decided hyperæsthesia was discovered, slight pressure causing her to start forward as though a sharp instrument had pierced her. There was no tenderness in any other portion of the spinal column.

She had been treated with purgatives, alteratives, opiates, etc., in various shapes and combinations, but without ever deriving anything more than temporary relief. Under the view that I had of the nature of her disease, I directed a succession of blisters to be applied over the tender points of the spine, and also put her upon the use of sulph. quinine, essence of beef, cream toddy, and, in short, a general tonic and supportive treatment. Improvement was prompt and decided, and from a month after the commencement of the treatment until the present time, her health has been uninterruptedly good.

Reasoning a posteriori, the conclusion seems inevitable that her long-continued ill health and frequent paroxysms of intense suffering were but the manifestations of perverted innervation from irritation of the upper dorsal region of the spinal cord.

CASE III.—Mrs. I., aged sixty-six, on July 31, 1870, was suddenly seized with paralysis of the left arm, for which I was summoned to see her in consultation. In addition to the paralysis, which was of the incomplete form, the whole of the left side of the body was racked with clonic spasm. In short, it seemed to be a case of hemichorea paralytica.

On the night of August 30th, by request of her physician, I again saw her in a similar attack, the spasms having continued more than twenty-four hours. Antispasmodics and opiates had been freely administered, but with no apparent effect. All irregular muscular action ceased, however, after taking potassii bromidi grs. xi.

November, 1872, she was placed under my immediate care, when I was informed, that for nearly two years she had been free from attacks of chorea, but that for some time past they

had become quite frequent and severe. I will briefly enumerate the symptoms in this case, either as presented at the time or developed afterwards, without entering into details, which would be more curious than instructive.

There was incomplete paralysis of the left arm, which had persisted since August 1870. Instead of growing progressively worse, as would have been the case in all probability had there been, as I at first apprehended, some cerebral lesion, her arm had been of considerable use to her in the ordinary occupation of house-keeping, and even in the more delicate manipulations of sewing and knitting. There was slight atrophy of the flexors and extensors of the forearm, as well as of the muscles of the hand; the thenar and hypothenar eminences being quite flattened. Electric irritability was somewhat diminished, as compared with the opposite limb, though the muscles readily responded to the induced current of low tension. The chronic spasms usually commenced in the hand of the paralyzed arm, extending upwards until the face was involved, very rarely affecting the lower extremity. Frequently there were fibrillary twitchings of the muscles of the face alone, but always on the left side.

Among the many other phenomena, I might mention the following: Imaginary noises, hæmalopia, palpitation of the heart with anæmic bruit, intermittent pulse, loss of appetite, acidity of stomach, depression of spirits, watchfulness, mental hallucinations, the unreal character of which she was perfectly aware of (they were often a source of amusement to her) and dysuria. After an attack of chorea there was often a copious deposit of amorphous phosphates, perhaps the progress of the disintegration of nerve structure, and sometimes the urine when first voided emitted a putrescent odor. There was tenderness upon pressure throughout the entire length of the spinal cord, it being more pronounced in the cervical and lumbar regions; and yet she never had complained once of pain in the back. She was perfectly exsanguine in appearance, and like

the second case mentioned, had been treated for pericarditis upon a somewhat spoliative plan.

It has been said that chorea, originating at such advanced age, is probably always indicative of organic lesion of the brain, generally sclerosis. After four years, two of which she had been under close observation, I fail to see such results as we would anticipate in a case of that kind. Apart from the essential difference in the symptoms of the two affections, the progress of this case is itself sufficient I think to exclude sclerosis, and indeed all organic disease of the nerve centres. In the treatment, I relied chiefly upon tonics, and counter-irritation along the spine either by blisters or caustic potassa. Internally, she took quinia, iron, and strychnia; the latter in the form of sulphate, in gradually increasing doses from the one-twenty-fourth of a grain to the one-seventh three times a day, to the degree of slight toxic effect, when it was omitted a day or two, and the minimum dose resumed. The bromides of potassium and calcium were found perfectly effective in controlling irregular muscular contractions, and were only used when necessary for that purpose. The nutrition and strength of the muscles of the paralyzed arm were considerably improved by the use of the Faradaic current.

Under the above treatment very gratifying results were obtained; and if it can not be said in truth that she is cured, it can at least be said that she enjoys an immunity from the distressing attacks to which she had been subject, hardly to have been anticipated.

PROCEEDINGS OF SOCIETIES.

"Etsi non prosunt singula, juncta juvant."

The Jefferson County (Ark.) Medical Society.

This Society held its annual election in January. The following officers were elected—viz., Dr. S. W. Jones, President;

Dr. B. K. Crowell, First Vice-President; Dr. D. S. Mills, Second Vice-President; Dr. J. E. Seymour, Secretary; Dr. J. F. Simmons, Treasurer. Dr. J. E. Seymour was appointed Essayist for the next meeting. The meeting was a very pleasant and interesting one. Some papers were read and cases in practice related and discussed.

Arkansas State Medical Association.

In the February number of your esteemed Journal appeared an article signed by one William Thompson, M. D., who attaches the official appendage, "First-Vice and Acting President" of this Association. With the said William as an individual, citizen, or physician, we have nothing whatever to do; but with what purports to be his official statement of the causes that finally culminated in the withdrawl of the leading medical gentlemen of the State from that Institution, we propose to exhibit to your enlightened readers in quite a different phase and attitude.

It seems very singular that so *distinguished* an official should thus hastily rush into print, and present to a reflecting public so much historical matter containing so little truth, when the truth would have served his purpose much better, and conveyed a degree of conviction to the mind which could in no other manner have been produced.

That this official personage is no "Heathen Chinee," we have positive evidence to the contrary; yet when he courageously designates those medical gentleman who happen to differ with him in opinion as "enemies to our Association," it smacks very strongly of Truthful James' method of imparting knowledge.

We are not aware that any of "our enemies" ever published a word or line in your Journal touching this Medical Association and the question of the unhappy differences of its members. As this is the official gentleman's excuse and license for his conduct, and if any of "our enemies" have been guilty of this offence, the Journal is at liberty to rise and explain. If

the Journal is silent or denies this assertion, then this portion of the official gentleman's version is untrue, and it naturally follows *a priori* that his whole volunteer statement is, to say the least of it, very indigestible diet for a christian gentleman to solace the qualms of conscience.

In explanation of this erroneous and perverted official publication, it would be proper perhaps to quote the language, and then state, by way of comparison, the truth. This course would require a redundancy of words, entail unnecessary length, and still be only a disjointed association of facts devoid of any interest whatever to the reader. Therefore it is thought best to make as concise and brief an exposé of the causes as possible, as we understand them, that have brought about the difficulty in our State Medical Association, and let the Profession at large judge for themselves of our conduct in the premises.

The State Medical Association has for several years been annoyed with a question of medical ethics. It first originated in the Pulaski County Medical Society. Application for membership to this Society was made by a Dr. Almon Brooks, a physician of another county, when objection was raised upon the ground of want of jurisdiction, and in accordance with a constitutional provision, had to lie over one month. When this applicant's name came up for action at the next meeting, the question of jurisdiction was overruled by a partisan majority, and George W. Lawrence, M. D., a physician of the same county, of known integrity and standing both in the National and State Medical Associations, entered a formal written protest against the admission of applicant into this Society on the ground of unprofessional and other unethical conduct, the same being well supported by sworn affidavits. And again, the name of applicant went over to the third meeting. At this, the largest representive meeting ever held, after a full discussion of the whole question, the application was rejected and the meeting adjourned.

Three days afterwards a call meeting was held by those

members favoring the applicant. The action of the meeting previous was, contrary to all parliamentary usages, rescinded, and fulsome and extravagant laudatory resolutions of the applicant passed and published broad-cast to the world, through the secular Press, as emanating from the whole Society. Then those members entertaining opposite views, pained and chagrined at such conduct from members of a scientific Society, held a meeting and entered a written protest denunciatory of the action of this called meeting. Thus this question finally culminated in a complete disruption of the Pulaski County Medical Society and the formation of the College of Physicians and Surgeons of the City of Little Rock.

In this condition the whole question was brought before the State Association, being carried to a higher tribunal for a final adjudication and settlement.

In the interim, a Medical Society of doubtful material was specially formed in applicant's county, sending said applicant as a delegate to the State Medical Association, in order to secure his admission without a consideration of the full question coming from the Pulaski County Society. Under these circumstances applicant was admitted to a seat in the Association, *pending* the final action of the committee on ethics, to whom said question was referred.

When the fourth annual session of the State Medical Association assembled, this question was in the hands of the committee on ethics. The committee expected and was ready to report, when, to intercept this action, a partisan of said applicant introduces a resolution, that the whole matter in controversy be referred to a special committee to consist of Drs. E. R. DuVal of Fort Smith; P. N. Burke, of Helena; and Thomas Smith, of Little Rock; and that the committee on ethics make no report in the case. Then followed a lively and animated discussion.

Dr. R. G. Jennings then moved, as a substitute, that the whole question be referred to a judicial council of three members, consisting of E. R. DuVal, of Fort Smith; J. M. Hol-

combe, of Pine Bluff; and F. N. Burke, of Helena; and that the report of this Council should be *final and binding upon all parties.* This was agreed to by almost a unanimous ballot.

This Judicial Council represented distinct and distant sections of the State from where the trouble arose or had been agitated, and embraced three men of known integrity and ability in the Profession.

The substitute was a compromise measure, and elicited a full and free discussion, every member of the Association then and there understanding that by referring this whole question to these unprejudiced umpires, it would take it from before the Association, and let their decision and report be what it would, it was never again to come up in open convention, but be "*final and binding upon all parties.*"

Dr. DuVal, Chairman, then asked when this Council was expected to report; that they could not conclude their investigations in time to report to the Association, but would have it ready for publication in the proceedings. This was consented to, no one opposing. The Judicial Council, after a consideration of all the facts in the matter before them, reported that applicant, Dr. A. Brooks, was "unworthy of membership on account of unprofessional conduct." They also severely censured the Pulaski County Medical Society for "breaches of ethics." All of which will be found in the published proceedings of the fourth annual session of the Association.

When the fifth annual Association assembled, on the 25th day of last October, few representative members were present from distant counties and local Societies, owing to the monetary stringency of the times, and the civil and political agitation that had so recently disturbed the people of our State.

The paucity of representation of local Societies and counties by delegates was, to some extent, expected, and as the question of the late controversy had been forever settled by the Judicial Council, a harmonious and agreeable reünion had been anticipated, in an earnest consideration of the question of public and professional advancement of the purposes for which the

Association had originally been organized. Judge, then, of our surprise when we observed a determination on the part of some members, including the official William, to revive this interminable question; this dead issue, and bring the whole matter again before this Convention. The Convention assembled, and was called to order at 11 o'clock A. M., but adjourned until 5 o'clock P. M., in order to give the Committee on Credentials time to report. It was now discovered that those members who desired to revive "the past issue" had obtained those opprobriums of scientific associations—proxies from most of the unrepresented Societies, and were in sufficient force to carry any measure they desired, however odious and disreputable to those not present or represented.

The Committee on Credentials made a majority and a minority report.

The majority of this committee assume to be the State Medical Association. They ignore all that has transpired in open Convention previously; rejected the report of the Judicial Council, and declared that the applicant, Dr. A. Brooks, was a permanent member. How a Committee on Credentials could constitute themselves umpires of such a momentous issue, is beyond the ken of our parliamentary knowledge.

The minority report embraced those permanent members who were unquestioned, and those delegates from local Societies who presented properly authenticated credentials.

Dr. Jennings moved the adoption of the minority report. He advocated the necessity of first perfecting an organization of the Association; reviewed the causes that produced the Judicial Council; the unanimous agreement of all the members to abide by their report; and more than all, the fact that this question had been already settled, *finally and forever*, by taking it from the open Convention and placing it in the hands of disinterested judges.

Then an irregular ballot was obtained (antagonistic to the positive method of balloting prescribed by the constitution of the Association), adopting the majority report. Here was wit-

nessed the degrading spectacle of an association of a Body of professional men, coming together for supposed scientific purposes, yet imitating the chicanery often practiced (unfortunately) in our political assemblies, with this exception, that parliamentary usages are, in a measure, respected; here, the greatest ignorance of such usages was not only displayed, but small-minded individuals were so blinded by prejudice that they wilfully overstalked the semblance of respectability.

When this revolutionary proceeding was enacted, Dr. A. L. Breysacher entered his protest and withdrew his name from the Association. The following medical gentlemen then withdrew, or soon afterwards authorized their names withdrawn: P. C. Hooper, J. H. Lenow, R. G. Jennings, E. V. Denell, Little Rock; P. T. Mark, Pulaski county; D. A. Linthicum, Helena; P. R. Ford, Phillips county; F. N. Burke, Helena; J. M. Holcombe, Pine Bluff; C. M. Taylor, South Bend; W. M. Lawrence, Batesville; O. A. Hobson, Geo. W. Lawrence, Hot Springs; E. R. DuVal, Fort Smith; O. Alexander, Rocky Comfort; W. W. Bailey, Fort Smith; W. P. Hart, Washington; W. H. Hawkins, Little River county; Geo. C. Hartt, Little Rock; W. G. Wright, Pine Bluff; W. B. Welsh, Washington county; E. T. Dale, Texarcana; E. A. Shippy, P. H. Ellsworth, Hot Springs; J. A. Stinson, Jacksonport.

These gentlemen are in no wise "conspirators," as the official William modestly brands them, for several of them are members of the American Medical Association; and the list includes the name of every President of the State Association since its organization. W. B. Welsh, M. D., the last President, elected after several members had withdrawn, has since resigned that honor and withdrawn his name from the Association, thus constituting a majority of the members of the State Medical Association, and also comprising the leading members of the Medical Profession of the State.

We have hitherto refrained from committing to print the facts we have just briefly given you, not from any personal grounds connected with our individual action, but from our

natural repugnance to publishing such stupidity and ignorance of parliamentary practice exhibited by those members of our worthy Profession who chance to differ in opinion with us.

EXPONENT.

ORIGINAL CORRESPONDENCE.

"Sit mihi Fas scribere audita."

NEW YORK, March 10, 1875.

Dr. E. S. Gaillard:

Dear Sir,—As is well known, it has come to be no uncommon thing in this city for medical men, when they read papers before the various professional societies, to have reporters for the daily newspapers present, by which means they hope to gain for themselves some measure of "glory, honor, and immortality," as well as a fair share of the patronage of the public. But this is only one of many ways by which our physicians are now in the habit of advertising themselves in the public Press. A very flagrant instance came to our notice some little time ago in one of the New York dailies, from which we quote: "An interesting experiment was performed on Friday last in Fall River, Massachusetts, by Drs. Julius Hoffman and Louis Wayland, of this city. Herman Dubois had suffered from consumption for five years, and had become very weak and debilitated. Physicians advised him to seek a warmer climate, but he had not sufficient strength to avail himself of this chance of relief. Dr. Hoffman had transfused blood from animals (dogs and lambs) to the human subject with success in six cases, and it was determined to make the experiment upon Mr. Dubois. Dr. Hoffman described the operation as follows." Here follows a lengthened description of it; but we will give you only its concluding portion. "The lamb's neck was then brought close to the patient's arm, and the pressure

of the forceps upon the lamb's artery relaxed. The blood rushed through the tube, expelling all the air. Then the opposite end was skillfully (what a fine opinion the doctor has of his own dexterity!) inserted into the patient's vein, and the pressure upon the lamb's artery removed. The bright blood leaped through the tube and entered the system of the patient. The stream was kept up for one minute and forty seconds; then the compression was renewed, and the tube removed. Yesterday I heard from Mr. Dubois, and he has sufficiently recovered his strength to enable him to visit a warmer climate, with good prospects of regaining his health. The lamb is also alive and doing well. (How interesting to hear of the good condition of dear little lamby). A lamb used in the same manner in a former experiment in this city is still alive, and is now tied in a stable in an adjoining street. (*Mirabile dictu!*) The human subject was so much benefited that he spent the summer in the Catskills, and is now in Baltimore."

Surely, one would say, only some egotistical quack would ever publish such an account as this in the public prints. Yet, in looking over the official register of *regular* physicians here which is entitled, "A list of physicians in the city and county of New York and its vicinity, who are in regular standing, and have not violated the Codes of Ethics of the American Medical Association and the Medical Society of the State of New York," it will be found that the names of both Drs. Hoffman and Wayland are therein recorded. Of what use is it to have standing at the head of the above list such quotations from the Code of Ethics as the following? "It is derogatory to the dignity of the Profession to resort to public advertisements, * * * or to publish cases and operations in the daily prints, or suffer such publications to be made; to invite laymen to be present at operations; to boast of cures and remedies; to adduce certificates of skill and success, or to perform any other similar acts. These are the ordinary practices of empirics, and are highly reprehensible in a regular physician."

Another method of obtaining notoriety by the newspapers, is

to let it be known through them that one is the family medical attendant of some one widely known and respected in the community. Thus, when a week or two since a young son of the Rev. Dr. Tyng accidentally wounded himself with a pistol, all the world could read the next morning that Dr. P. was promptly on hand and rendered the most skillful and efficient services.

The last means of gratuitous advertising to which we shall allude on the present occasion, and of which quite a number of our practitioners have availed themselves, is that afforded by the St. John's Guild, an Institution which, for some time past, has been accomplishing a vast deal of good among the poor of this city. The following paragraphs, which we clip from one of the New York dailies of last week, is certainly hard to eclipse in the way of newspaper rhetoric: "In company with one of the volunteer physicians (here giving his name), the writer went to see a skeleton baby at a house in South Fifth Avenue. The infant was found by us in a condition of life before which an artist would shudder and his pencil fall motionless. All semblance of the human form we love to call divine was gone. The limbs, shrunken to a shadow of what they had been in health—the leg no larger than one's finger—seemed palsied by the hand that smites old age till it falls into the crumbling dust. In the child's eyes, hopeless longing; in the mother's, utter despair. Such was the picture. It was a scene to be long remembered, and to raise up friends for that doctor, when he moved about with more than a woman's tenderness and more than a lecturer's nerve, preparing those two for a return to life. The cellar seemed glorified. Where hunger, cold, and night had been, there came in the light and promise of the morning. The dark-colored vial he left upon the rude box that performed the office of a table seemed touched by the wand of a magician, to expand into a bouquet of violets. The indescribable glory of a good action filled the room. Its perfume floated in the air." Henceforth, will it be possible for any human being to doubt the charitableness of the Medical Profession? (Correspondent should give the names.—Ed.)

There is, no doubt, urgent need of a reformation in the affairs to which we have thus called attention; but until it comes, we can console ourselves with the reflection that such practices, as far as we have been able to learn, are not confined *exclusively* to New York.

On Friday evening last (March 5th) the Medical Library and Journal Association was entertained by the exhibition of a series of views representing the pathological changes in various forms of lesion of the nervous system, with descriptive remarks, by Dr. Allen McLane Hamilton. Dr. H. is a young man who seems to have rather an ambition to keep his name, in some way or other before the public (we do not, of course, refer to strictly professional occasions, like the one now spoken of); and in this way has won for himself considerable popularity, as well as some little notoriety. We will give only one instance. Last Summer his name, as one would naturally expect, appeared on the list of the medical jury in the noted case of McCormick; and he took a very prominent part in the extraordinary discussion on hydrophobia, with which we were regaled at that time. The above-mentioned views were thrown on the screen with great brilliancy and distinctness by means of the magic lantern, illuminated by the oxy-hydrogen light; and we are glad to say that this is now getting to be a favorite method of class demonstration in our medical schools. It was first employed here, we believe, by Professor Arnold, of the University. Just as Dr. Hamilton was about to project his first picture upon the canvas, the dignified Association was thrown into convulsions of laughter by beholding the unmistakable outlines of the profile of Dr. Joel Foster portrayed with the most startling vividness on the brightly illuminated screen. He had come into the darkened room late, and without comprehending what was going on, and thus found himself, before he was at all aware of it, "the cynosure of neighboring eyes." Suffice it to say, that it did not take him long to "get out of focus." "Uncle Joel," though in reality one of the most garrulous and good-natured old gentlemen in the world, has a caste of counte-

nance quite Mephistophelian in its malignity; and is the only man, we think, who can dispute the claim to being the homeliest M. D. in New York with Ellsworth Eliot, the worthy vice-president of our State Medical Society. He is a constant attendant at this and other societies; invariably takes a front seat, and just as invariably drops off to sleep before he has been sitting there half an hour.

The most interesting pathological representations were photographs of the changes in nerve structure in *miliary sclerosis*, now so often found in the paralysis of the insane, and of a remarkable case of perforation of the *Casserian ganglion* by an *exostosis* from the temporal bone, producing persistent and incurable neuralgia, and reported in the "Archives de Physiologie." Dr. Hamilton brought his instructive exhibition to a close by showing a carricature of the lank countenance (closely resembling Doré's Don Quixotte) of Mr. Henry Bergh; to whom the Doctor said we should doubtless owe more of the physiology of the future than to any other one man. This was, of course, an allusion to the indefatigable exertions recently made by Bergh to obtain the repeal of the clause in the Cruelty to Animal Laws, which protects scientific men in making vivisections and other similar experiments.

Dr. Dawson has just devised a modification of Sims' speculum, which renders it much more easy to carry it about, without interfering at all with its utility. In his instrument the blades, when not in use, fold down upon the centre-piece by means of hinges at their bases. Faithfully yours,

STAR.

MERIDIAN, TEXAS, January 20, 1875.

Editor Richmond and Louisville Med. Jour.:

Dear Sir,—Permit me, through the columns of your excellent Journal, to call the attention of the Profession to the value of the syrup of the iodide of iron, in the treatment of purpura hæmorrhagica. During the past two years I treated

successfully several cases of well-marked purpura with syrup ferri iodidi., after the ordinary methods of treatment had failed. To adults I gave gtts. x., gradually increased to gtts. xx., thrice daily, and instructed my patients to discontinue the treatment for a few days, should symptoms of coryza supervene. The treatment was generally continued about two months. In my opinion this is a useful remedy in the treatment of purpura, and I do not hesitate to recommend it.

Yours truly,

J. H. Wysong, M. D.

CHEMICAL AND PHARMACEUTICAL.

"Diruit, ædificat, mutat."—Hor.

Action of Mercury upon the Blood.—Dr. Wilbouchewitch, of Moscow ("Archiv. de Physiologie," "Boston Med. Journal"), has made a practical application of the ingenious apparatus devised by Mahassez for counting the blood corpuscles. This apparatus briefly consists of a fine capillary glass tube of definite capacity, so small as to bear a microscopic examination with an object glass capable of defining the blood corpuscles. The blood is diluted with artificial serum, placed in the tube, the corpuscles counted. By a simple calculation it is easy to ascertain the number of corpuscles in a given amount of blood.

He found that in the healthy subject the number of blood discs averged 4,600,000 to the cubic millimetre. In different individuals it varied from four to six millions, but in the same subject the number remained pretty constant.

In syphilitic subjects examined before the beginning of specific treatment, the author found a progressive decrease of blood corpuscles amounting generally to more than 200,000 daily. As soon as mercurial treatment was instituted (one and two-thirds grains of proto-iodide was begun) the blood corpuscles

began to increase in number at the daily rate of about 80,000 during the first week, and then at the rate of 120,000 daily. This increase continued during two or three weeks only. Then the number began to again diminish, so that in a fortnight the number of discs was about the same as at the beginning of treatment. If now the treatment was suspended, the destruction of corpuscles ceased, and in about a week the blood began to grow richer at a daily rate of about 90,000. As a general rule the white corpuscles underwent variations inverse to those of the red corpuscles.

These experiments teach that the administration of mercury in syphilis should be intermittent, in order that the drug shall not itself act as a destructive agent upon the blood corpuscles.

Oleate of Mercury (for External Applications).—Much difficulty has been experienced in the preparation of this really valuable mercurial compound. The mistake generally made arises from the erroneous idea that heat is required to effect the union of the constituents. The fact is that the effect of even a gentle heat is detrimental to the preparation, generally causing a reduction of the metal, with the formation of an unsightly grayish-black deposit. Most authorities recommend the use of the yellow oxide of mercury, representing that it is more readily dissolved by the oleic acid, than the red oxide. Undoubtedly this is in some sense true, but unless the yellow oxide is sifted into the oleic acid, and well mixed with it by careful stirring, it is apt to aggregate in solid lumps, which resist the action of the solvent a long time. On the other hand, the red oxide, if reduced to a fine powder, dissolves with sufficient rapidity, and requires no special precaution to prevent the formation of lumps.

The following formula in our hands has always yielded a satisfactory product:

℞—Red Oxide of Mercury in fine powder, ʒvi.;
Oleic Acid, purified, Oi.

Mix the oxide with the acid in the cold, and stir occasionally

until a transparent solution is obtained. Keep the product in well-stopped bottles, protected from the light.—*Detroit Rev. of Med. and Pharm.*

Adulteration of Cane Sugar—The manufacture of glucose from starch is growing rapidly in extent and importance abroad, and is already fairly established at home. Fine specimens of an article of American manufacture were recently exhibited at a pharmaceutical meeting in Philadelphia. The finest grades are made from wheat starch, and are quite white. It is stated that the glucose is employed largely by brewers as a substitute for malt.

The low price at which refined sugars are now sold suggests another explanation of the growing importance of this manufacture. The difference in price between raw and refined sugar is too small to allow any margin of profit to the refiner. Adulteration, therefore, must be practiced, and chemical tests applied to the refined sugars show that glucose has been introduced into them in very considerable quantities. The quality of the sugar is, of course, deteriorated just in proportion as its cost has been reduced, and the consumer is cheated besides, because he does not get what he pays for.—*Detroit Rev. of Med. and Pharm.*

Sewer Gas.—An invention has been patented in England, by T. Harding, which is intended to prevent the entrance of sewer gas into dwellings. Connected with the main sewer is a pipe two inches in diameter, and at the top of the pipe is a ball, so fixed that it allows an aperture of a quarter of an inch all around, through which the sewer gas may escape from the pipe. Running up outside of the large pipe is an ordinary gas pipe, and just underneath the ball at the top of the sewer pipe a set of burners is so arranged that when lighted they make a complete circle of fire. The ball prevents the sewer gas from rising through the centre, and it can not escape through the flame, which entirely surrounds the aperture. The consequence is that the sewer gas mingles with the ordinary gas,

and is consumed, adding, it is said, greatly to the brilliancy of the flame. The invention may be easily applied to the public lamps, and we are informed that a one-inch pipe may be used, and that the increase in the illuminating power that would be thus gained is enormous. Another advantage is that the ball and the upper part of the pipe soon gets intensely hot, and the heat draws the foul air from the sewers, leaving them perfectly free.—*Ex.*

Testing for Grape Sugar in Solution of Cane Sugar.—Braun recommends to add caustic soda to the sugar solution, and heat to about 90° C., then add a few drops of picric acid and boil. Cane sugar has no effect on the picric acid solution, while grape sugar converts it into picramic acid, which has a reddish color in dilute solution of grape sugar, and a deep blood-red in more concentrated solutions. One drop of a concentrated aqueous solution of picric acid suffices for 20 c. c. of solution to be tested; the whole may then be heated to boiling, and three drops of a moderately concentrated solution of soda added. Milk and fruit sugar produce the same reäction.—*Jour. of Applied Chem.*

Local Use of Tannin.—Dr. Miall ("British Medical Journal") gives the following facts from his experience in the local use of tannin: He uses a concentrated solution. It is prepared by adding to one ounce of tannin six drachms of water. The solution is a thick fluid, that keeps well. It is used to convert living skin into leather. For wounds it is a far superior dressing to collodion. If applied by a brush and allowed to dry, it soon forms a pellicle, which excludes the air and gives ease to pain. It may be applied to ulcers, cracked nipples, enlarged tonsils, bleeding warts, chronic phlegmonous, erysipelas, polypus of ear, with excellent results.—*Detroit Review of Medicine.*

Ptyalin.—By a process identical with that employed by Scheffer for pepsin, and by Mr. Mattison for pancreatin, Mr.

Albert G. Brown obtains from the parotid gland of the pig a substance which he calls ptyalin. According to the author's statements the ptyalin, like pancreatin, has the property of emulsifying cod-liver oil, and of converting starch into glucose, while it resembles pepsin in its power of dissolving, by the aid of acids, coägulated albumen. There appears to be still some doubt whether the products obtained by Scheffer's process from the various organs are entitled to be designated respectively as pancreatin, ptyalin, etc. That they possess in a high degree the properties of the digestive fluids which they severally represent seems to be a fact. We hope that physicians, as they have opportunity, will give them a trial, and report results, positive and negative, for the benefit of their brethren.—*Detroit Review of Medicine.*

Saccharated Pancreatin.—The following is Mr. R. V. Mattison's process for preparing Saccharated Pancreatin: The pancreases are dissected and macerated in water acidulated with hydrochloric acid, for about forty-eight hours, then separated, and the acidulated solution of pancreatin passed through a pulp filter until it is perfectly clear; to this solution is then added a saturated solution of common salt, and the mixture is allowed to stand until the pancreatin is separated. This is then carefully skimmed off and placed upon a muslin filter and allowed to drain, after which it should be washed with a less concentrated solution of salt and then put under the press. When the mass is nearly dry, it is rubbed with a quantity of sugar of milk, and dried thoroughly without heat, after which its strength is so adjusted by the further addition of sugar of milk that ten grains of the completed preparation will emulsify two drachms of cod-liver oil.—*Proceedings of Am. Pharm. Association.*

New Decorative Processes.—Another interesting invention for which decorative art is indebted to Dr. Kosch is the fusion of gold, silver, and platinum with bronze, by which the most gorgeous effects are produced; gold fusion giving to the metal a

splendid violet tint, silver a faintly-lustrous "Kioto" tone, and platinum a rich and deep black shade. The intermediate tints may be obtained by modifications of heat, while the same process may be applied with nearly equal success for cast iron. Dr. Kosch has succeeded in producing very novel effects by laying on one tone upon the other, as, for instance, colored leaves and variegated arabesques on differently-tinted metallic surfaces; and his method is beginning to be extended to the ornamentation of leather, thus bidding fair to revive, at a moderate cost, the art of preparing leather mosaics, which owed its origin to Grolier, and is one of the most elegant of the numerous artistic adaptations of inexpensive materials to artistic purposes, for which the sixteenth century was distinguished.—*Bost. Jour. of Chem.*

Photographing the Transit.—One of the greatest benefits conferred upon science by photography has occurred during the present winter. We refer to the success of the photographic sections of nearly all the expeditions sent to observe the transit. At one station 113 photographs were taken, at another, 50, at a third, 15, and so on, with many yet to hear from. One special advantage of photographic observation is the absence, as Capt. Abney states, of what is called the "black drop." As this is a subjective phenomenon, the result of nervous influence, it can not be overcome in the eye of the observer, but is equally without effect on the sensitive photographic plate. It seems probable that the French photographs, being taken on daguerreotype plates, will prove more valuable than those taken on elastic collodion film.—*Ex.*

How to Deprive Iodine of its Stain.—Add a few drops of carbolic acid to the tincture, and it will not stain; moreover, the tincture is more efficacious, and its action more certain. M. Boggs recommends the following formula for use in injections: Alcoholic tincture iodine, 3 grammes; carbolic acid, 6 drops; glycerin, 30 grammes; distilled water, 150 grammes. —*Exchange.*

Preserving Fresh Meat.—The preservation of fresh meat for a number of weeks at the present season of the year is attended with no difficulty. In warmer weather, and in places where ice is neither cheap nor plentiful, it is less simple. For those who have no ice cellars, Kauffmann, of Berlin, recommends an atmosphere of sulphurous acid, generated in this simple manner: The head is taken out of a molasses hogshead or tight cask of any kind, and hooks attached to the underside of the head, and on these hooks the meat is hung. A dish with some pieces of sulphur is placed in the cask, and the sulphur ignited and the head replaced air-tight. This operation is occasionally repeated. Meat placed in this apparatus is kept fresh and sound for ten days in midsummer, without acquiring the slightest smell or taste of the sulphur.—*Ex.*

Determination of Manganese.—Léclere employs the following method in the determination of manganese in soils and vegetable products: The manganese present is oxidized by treatment with nitric acid and red oxide of lead, to permanganate and triturating with mercurous nitrate. The amount of chlorine present must be determined in order to avoid error from this source. For the determination of thallium, a writer in the "Revue Hebdomadaire de Chimie," suggests the following process: Dissolve the mineral containing it in aqua regia. Dilute the strongly acid solution, and remove the metals which will precipitate with hydrosulphuric acid, filter and boil out the excess of hydrosulphuric acid, treat with a slight excess of sodic carbonate, and filter hot. In the filtrate, ammonic sulphide will precipitate the thallium completely as sulphide.

To test narcine, Prof. A. Vogel pours chlorine water on it in a watch-glass, and adds a few drops of ammonia. A deep blood-red color is produced, which does not disappear in an excess of ammonia nor by heating.

The test often given to ascertain whether flowers of sulphur contain arsenic is to digest with aqua ammonia and filter, and to the filtrate add hydrochloric acid. If this causes turbidity,

arsenic is present. This test is founded on the supposition that the arsenic is present as sulphide, or, if present as an arsenious acid, it will be converted into sulphide by digestion with ammonia. This is seldom the case. The arsenious acid, not being converted into sulphide of arsenic, it remains dissolved in the hydrochloric acid. It is only by adding sulphuretted hydrogen to the acid solution, and observing whether a yellow precipitate is formed, that the absence of arsenic is proven.—*Jour. of Applied Chemistry.*

Destroying the Cotton in Half-wool Goods.—The following methods are recommended for ridding such goods of the cotton fiber so as to use the wool over again: The dry method consists in exposing the goods to a tolerable high heat in the vapors of hydrochloric acid. The wet method consists in treating the goods for half an hour in a solution of sulphuric acid of 15° B., to which two pounds of salt have been added, drying at 45 to 50°, and then neutralizing the remaining excess of acid by a weak soda solution.—*Ex.*

Corrosive Sublimate in Saccharated Calomel.—Dr. Polk corrobates the statement of Vulpius, that when calomel is mixed in powder with white sugar, or calcined magnesia, or bicarbonate of soda, corrosive sublimate is formed in twenty-four hours. Dr. Polk found the administration of 10 grains of saccharated calomel, which had been prepared a month previous, was attended with poisonous effects. Examination revealed the fact that a considerable quantity of perchloride of mercury was contained in the remainder of the sample.—*Jour. of Applied Chemistry.*

Antiquity of Iron.—The discovery of a wedge or plate of iron imbedded in the masonry of the great Pyramid proves that iron was in use 5,400 years ago, in the age of King Cheops. It is even probable that it was known in the time of Moses.—*Ex.*

MISCELLANEOUS.

"Non omnes eadem mirantur ament que."

The Inquest on Sir Charles Lyell.—The inquest held by Dr. Hardwicke on the body of Sir Charles Lyell has excited a good deal of public feeling, and been the subject of notice in Parliament. Mr. Cross was questioned as to the propriety and legality of the proceeding, and replied in that clear and plain-spoken way for which he is known. There can be little doubt that Dr. Hardwicke acted within his legal powers in holding an inquest. The coroner has great discretionary powers, and is all but absolute in the use of them. And if he liked to be prying and curious in the search for information of all the incidents which happen in the course of long illnesses resulting in death, he would often doubtless discover circumstances which would give him a good show of reason for holding an inquiry. In Sir Charles Lyell's case there was an incident of this sort. He undoubtedly had a stumble on the staircase, which resulted, not in a heavy fall, but in his slipping down several stairs in a somewhat irregular manner. In this fall he incurred a bruise on the forehead and some injury to his thumb, which led to Sir James Paget being consulted. This incident occurred on the 9th of December. "To all appearance," in the language of the Home Secretary, "he recovered entirely in about a fortnight from the effects of it." Such an incident by itself, and followed shortly by death, would make it a duty of the coroner to hold an inquest. But here comes the peculiarity of this case. The fall occurred in the middle of an ordinary process of cerebral degeneration, characterized by vertigo and similar symptoms, for which Dr. Andrew Clark had been in attendance since the Autumn. The course of this sad failure of a brain that has done so much for the world was altogether such as might have been expected, apart from the accident of December the 9th. The kind of winter we have had is known to be very injurious to such cases. Sir Charles seemed to recover

from the effects of the fall, and even to get better, but after Christmas he got worse. Vertigo increased, the brain got duller, he became semi-conscious, and he died at the end of February, between two and three months after the accident, and a much longer time after the indication of disease for which Dr. Andrew Clark had been consulted.

These are the circumstances in which Dr. Hardwicke, notwithstanding a statement of the cause of death from Dr. Andrew Clark, and a strong intimation from that competent gentleman that an inquest was not necessary, if not unjustifiable, thought fit to hold an inquiry, even after the body had been enclosed in a lead and oak coffin. We often have to complain that inquests are not held when they should be held. Here we confess that, in our opinion, Dr. Hardwicke failed in that discretion which is, or ought to be, a principal quality in a coroner. A large number of cases come before a coroner in which the right use of this quality saves an inquest, with all the attendant trouble to friends already sufficiently distressed. The present was eminently such a case. It is bad enough that so great a brain should have lost its steadiness, and so involved its owner in a fall. But that this intelligible accident in the course of a too ordinary but painful illness should have been made the ground of an inquest, is deeply to be regretted. A lawyer, ignorant of cerebral disease, could not have done worse or made a greater mistake; and a few more such errors would destroy the strong public faith in medical coroners. The remark of Dr. Hardwicke about the rich and the poor man is irrelevant, and, we must add, in very bad taste. In the case of a poor man, with facts so clear, the inquest would have been equally ill-judged. Having said this much, we hope that this incident will now be dismissed from public notice. Dr. Hardwicke has suffered severely from public criticism. He has yet, we trust, a long career before him in which to show that discretion which is conspicuous by its absence in this unfortunate instance.—*Lancet.*

A Visible Stellation of the Crystalline Lens.—In the part of the Ophthalmic Hospital Reports recently issued, Mr. Tweedy, of the Royal London Ophthalmic Hospital, has given a description of a peculiar striation or stellation of the human crystalline lens visible in the living eye, which, notwithstanding the close examination to which this body has been subjected in health and in disease for many years past, has hitherto escaped observation. In order to see it, the patient must be seated with a lamp a little above and in front of him, the light of which must be concentrated with a lens, as in ordinary oblique illumination. The observer must then look obliquely at the lens from the side opposite to that on which the light falls. Portions of the anterior stella of the lens will thus come into view, and if the head of the observer be moved a little up or down, all the rays, which vary in number from six to eight, may be distinctly seen. Most of the rays undergo dichotomous division as they pass towards the periphery. In the normal eye the lines are dark and gently undulating, and Mr. Tweedy regards them as "negative structures, mere fissures or seams formed by the apposition of the ends of the fibres." He points out the bearing of the rays on cataract, and shows that the earliest perceptible cataractous changes in the cortical layers of the lens, especially of old people, appear in the ends of the fibres adjoining the above-mentioned rays. Sooner or later, however, the retrogressive changes extend, so that the line of the ray ultimately becomes obliterated by the disruption of the lens-tubules and destruction of their contour. Mr. Tweedy then proceeds to give the mode of subjective examination of the rays, and their influence on vision.—*Lancet.*

New Treatment of Boils.—Dr. Madison Marsh, of Port Hudson, La., says, in the "Medical and Surgical Reporter," that boils and other analogous affections are treated by him with sulphuric acid, which he regards as almost a specific. He has used the acid with constant success for five and twenty years. "As soon as the patient applies for relief," he says, "I put an

adult on elixir vitriol, 20 drops three times a day, in a glass of sweetened water, one hour before meals, previously smearing the teeth well with fresh butter or chewing a piece of fat pork, for a sure protection to the teeth. This is much better than sucking it through a quill, as there is in this way regurgitation enough to throw the acid forward on to the teeth. Using the butter or pork is a perfect protection, if the teeth are subsequently washed with a solution of bicarb. soda, a heaping teaspoonful to a glass of water. In the use of sulphuric acid in this way, the boil (or crop) then on hand will soon melt away, and there will be but one effort more to return, before they will finally disappear, no more to reäppear. The acid should be kept up in ten-drop doses for at least two weeks after the boils have disappeared. To assist in their local treatment, to effect a speedy cure and afford relief from pain and soreness, I apply a piece of common adhesive plaster, cut round, sufficiently large to cover the tumor to the extent of the areola, clipping the edges so that it will set smooth; or a little shoemaker's wax spread on a cloth will do just as well. I have made this application to saddle-boils, and next day rode in the saddle very comfortably, the boil progressing to maturity with very little pain, and sometimes effecting an abortion at once.

"In this connection I have read in your 'Periscope' a very interesting and scientific article on the sulphides of soda, potash, and calcium, as an antidote for all these ills of humanity. And now, right here, let me suggest, perhaps the chemical play of affinities in Nature's chemical laboratory may evolve the sulphides in the same way that chloral amateurs claim that hydrate of chloral is metamorphosed in the blood into chloroform."

The New Optometer.—W. Laidlaw Purves, of Hanover street, says: If Mr. Jeafferson will again read the description of the optometer in the Journal of January 16th, he will there find that in "the beginning of 1873" I had proposed an instrument corresponding to the "Refraction Ophthalmoscope," described in his "Aids to Ophthalmic Diagnosis," published in July, 1874,

and which seems to me more completely and better fitted for the purposes for which both instruments were designed, in that while the powers obtained are more numerous, the obtaining of them by means of the rack moving the two discs is much easier. A description of the instrument will be found in a pamphlet, entitled "A Contribution to Ophthalmoscopy," published by me in February, 1873, and in the "Catalogue of the British Medical Association" of the same year, No. 410, p. 119. By means of this instrument, the ophthalmoscopist, or any one accustomed to the use of optical instruments, can determine his own degree of myopia or hypermetropia, or that of an educated and careful observer. But, as in the determining of patients in private or in hospital practice, we have not generally to deal with such, and, as in this instrument, by no yet known method, will enable us to correct an astigmatic ametropia, so as to allow of the determination of the refraction by the usual control tests, I can not see how Mr. Jeafferson can call the instrument described by him in 1874, and by myself in 1873, the same instrument as one in which, by the combination of + and — spherical and cylindrical lenses, arrangements are made for the determination of simple, compound, or mixed astigmatism, in addition to the simple myopia and hypermetropia corrected by the instruments above mentioned.

The objections which Mr. Jeafferson found to his instrument from its size and the necessity of having recourse to the table of calculations, were foreseen and obviated in the new instrument proposed, by having the glasses of the usual testing size, and by the product of any combination being found opposite the combination.

The table of calculations had been formed by me on much the same plan as Mr. Jeafferson's, but occupying half the space. It will be noted that the one-half of the calculations in Mr. Jeafferson's table is a repetition of the other, which a slightly different arrangement of the figures would have rendered necessary.—*British Med. Jour.*

Increase in the Duration of Life.—In ancient Rome, during the period between the years 200 and 300 A. D., the average duration of life among the upper classes was thirty years. In the present century, among the same classes of people, it amounts to fifty years. In the sixteenth century the mean duration of life in Geneva was 21 21 years, between 1814 and 1833 it was 40.68 years, and at the present time as many people live to seventy years of age as three hundred years ago lived to the age of forty-three. In the year 1693 the British Government borrowed money, the amounts borrowed to be paid in annuities, on the basis of the mean duration of life at that time. The State Treasury made thereby a good bargain, and all parties to the transaction were satisfied. Ninety-seven years later, Pitt established another tontine or annuity company, based on the presumption that the mortality would remain the same as 100 years before. But in this instance it transpired that the government had made a bad bargain, since while in the first tontine 10,000 persons of either sex died under the age of twenty-eight, 100 years later only 5,772 males, and 6,416 females died under this age. From these facts it appears that life under certain favorable influences, has gained in many, and probably in all its forms and manifestations, both in vigor and duration. To still further promote this tendency, it is only necessary that these conditions under which the attainment of the desired end is possible, be made to accord with the fundamental natural laws.—*Deutsche Versicherungs-Zeitung.*

Mortality of Races.—The "Deutsche Zeitung," of New Orleans, contains the following interesting notes on the mortality of the two races there, taken from statistics of Dr. Chille. The mortality of the colored population has always been decidedly in excess of that of the white population, excepting during yellow-fever epidemics, this disease chiefly affecting the whites. There is no doubt that this greater mortality existed before the war in New Orleans and other cities—certainly in Charleston, Washington, Baltimore and New York. In comparing the five

years of freedom, from 1866–70, with the four years of slavery from 1856–60, we find the aggregate death-rate has remained about the same. But when a comparison is drawn between the white and blacks in these periods, it appears that the mortality of the blacks has greatly increased. Thus, during the four years 1856–60 (1858, a yellow-fever year, being excluded) the colored death-rate was about 44 to the thousand, and the white 33 per thousand; while in the four years 1866–70, (excluding the yellow-fever year, 1867) the colored death-rate amounted to 43 and the white to only 33 per thousand. What are the causes to which we shall ascribe this larger mortality of the colored race? The official sanitary records afford scarcely any data bearing upon this point, and therefore are of no assistance in determining the question. Some of these causes doubtless lie in the greater ignorance and improvidence of this race, and in the fact that its mortality from small-pox, cholera, consumption, still-births and diseases of children, is greater. The future of this race will depend upon the degree of its natural increase by propagation. The only reports of the Health Board which throw any light upon this matter, are those for the years 1872 and 1873, since these alone give the number of deaths among children under two years of age, with the two races separated. Regarding the population in 1872–3 as the same as that in 1870, we find that in the year 1872, in every thousand children, 154 white children died under 2 years of age and 298 colored, and in the year 1873, 181 white and 335 colored per thousand died under the same age. This proves conclusively, that in New Orleans the mortality among the colored children as compared with the mortality of white children is enormous.—*Deutsche Versicherungs-Zeitung.*

Animals as Motors.—M. Marey, to whose work on "Animal Mechanism" we alluded last month, has laid before the French Association for the Advancement of Science some interesting observations on the employment of animals as motor powers.

He proves by means of a very elaborate instrument that the movement of animated beings as motor powers takes place by jerks, whence result shocks, and consequently a waste of labor. As an illustration of this theory, M. Marey cites the effort necessary to draw a burden behind one. If the necessary force be transmitted by means of a rigid or almost unextensible strap, for instance, of leather, the movement is jerky and more difficult than if it were transmitted by an elastic strap. It would, therefore, be better to attach horses to the shafts with india-rubber traces. He also gives as an illustration the manner in which boats are always dragged along the towing-paths by long ropes. It would be impossible, or at least very distressing, to employ short ones. The length of the rope, which alternately tightens or slackens by slow oscillations, has in this case the same effect as india-rubber.—*Exchange.*

Radical Cure of Hydrocele by Electro-puncture.—Ehrhard ("Betz's Memorabilien") has employed electro-puncture with permanent good effect in four cases of hydrocele. He uses the interrupted current from a small Gaiff's apparatus. In three of the cases, the hydrocele was only of short duration, and absorption took place in from three to four days, without any reäction. The hydroceles had not been previously tapped. In the fourth case, the patient was a man aged fifty-two, who had had hydrocele eight years, and had been tapped many times. Under the use of electro-puncture, absorption of the fluid took place in three weeks. Four months afterwards, there was no indication of a return of the malady.—*Ex.*

Daylight Reflectors.—By means of reflection much additional light may be thrown into a window, especially in narrow streets, where no direct skylight can fall upon the windows. If, however, the surrounding walls are kept of a light color, almost as much light can be admitted as if there were no obstructions and the windows were open to the sky. The law of the reflection of light is that the incident ray which falls upon any bright surface

makes with the perpendicular to the surface at the point of incident the same angle that the reflected ray makes. If, then, we place a plane reflector outside a window at an angle of 45° to the horizon, so as to allow the light from the sky to fall upon it, the rays will enter the window horizontally; or, if placed at 60° with the horizon, the reflected rays will enter the window at an angle of 30° to the horizon; so that by regulating the position of the reflector, the light may be thrown into the window in any direction that may be required, and as much light can thereby be brought into a dark room as would be obtained from a small skylight.—*Bost. Jour. of Chem.*

An Antidote to Chloroform.—Dr. Schüller has discovered that the nitrite of amyl quickly removes the effects of chloroform on the vessels of the pia mater, and that even in cases of advanced narcotism from the latter drug it rapidly relieves the dyspnœa and labored respiration, restoring the strength of the pulse, and the reflex excitability. This discovery may prove of much practical value where chloroform continues to be the favorite anæsthetic.—*Ex.*

Medicine for Orchard Mice.—Since the sad havoc made by mice in our apple and pear orchards several years ago, we have adopted the plan of placing around each tree a covering of tarred paper, late in the Autumn. This has proved entirely successful, and as it costs but little for material or labor, we venture to recommend it. The cylinder of paper should be brought close to the ground, and extend high enough to protect the tree for a foot or more above, and the cord holding it in place should be securely tied without a loop-knot. Trees that are liable to be covered by deep snows must be protected for more than one foot, as we have had trees from which the bark was gnawed *three feet* above the ground, not only the trunk being denuded, but many of the limbs. Mice attack almost every kind of bush, shrub, and tree. The bitter barks

of the peach and cherry appear to be fully as acceptable as those of the pear or plum. Where mice prevail, it will not do to depend upon any of the usual expedients, such as banking trees with earth or manure, or treading down the snow in winter. Reliance upon these has cost us more than one hundred of our choicest fruit trees. The tarred paper coverings must be renewed fresh each year, as they become so tender or brittle that they can not be used a second time.—*Bost. Jour. of Chem.*

Comparative Length of the Spinal Cord.—C. Fehst (Inaugural Dissertation, 1874) found that, in bodies of twelve adult men, the average length of the spinal cord was 45 centimètres (nearly 18 inches, or 1.476 feet); that of the vertebral column, 73 centimètres (28.7 inches); the average length of the body being 168.6 centimètres (a little above 5 feet 6 inches). In twelve women, the measurements were respectively 43.8 centimèters (17¼ inches or 1.43 feet), 68.2 centimètres (25¼ inches), and 167 centimètres (5 feet 1 4-5 inches). Thus, in men, the length of the spinal cord was, to that of the vertebral column, as 1 : 1.62, and to that of the whole body as 1 : 3.76; while in women the ratios were 1 : 5.6 and 1 : 3.58. Except in one case, the spinal cord terminated in the men either at the middle or at the lower border of the first lumbar vertebra; in the women, it reached in three cases to the lower end of the first, and in three to the lower end of the second lumbar vertebra, and in the remaining six cases to the middle of the second. Hence the first lumbar vertebra in men, and the second in women, may be assumed as the lower limit of the cord. The conus medullaris (lumbar enlargement) extended further down in women than in men. In children, the sexual differnce in the length of the spinal cord and in its relation to the vertebral canal is almost entirely absent. In the bodies of male children between one and three months old, the ratios of the length of the spinal cord to the vertebral canal and to the length of the body were 1 : 1.59 and 1 : 3.26; in female children, 1 : 1.58 and 1 : 3.20. In both sexes, the conus medullaris ended at the

lower border of the second lumbar vertebra. Additional measurements on the bodies of older children lead to the conclusion that the relations between the length of the spinal cord and of the vertebral canal correspond to those of adult females, and that in males there is a growth of the vertebral canal greater in proportion than that of the spinal cord.—*Centralblatt fur Chirurgie.—Brit. Med. Jour.*

In cases of dropsy of the joints, especially that of the knee, Dr. Bergeret finds the continued application of bags of hot sand to answer better than any other kind of treatment. When the acute stage is passed, and whatever may be the cause of the dropsy, he wraps the joint in a thick layer of cotton-wool, and applies to this a sack containing two or three litres of fine and very hot sand. The dropsy disappears in a few days. The sand must be very hot, and the heat may be kept up by means of covering with a blanket. The sand must not be too thick in the bag, so that it may extend easily on the knee, and overhang the hydrarthosis in every direction.—*Ex.*

Treatment of the Wound after Extirpation of Tumors of the Breast—Metallic Sutures.—Dr. Vibert, of Puy, describes in the "Lyon Mèdical," the following process, which he has employed with advantage during the last eight years. When the tumor has been removed, and all the arteries taken up with the help of thick *serre-fines*, a series of fine silver wires are passed at a distance of about four-fifths of an inch, or less, from each other, by a slightly curved packing-needle, about six inches long, and as thick as a large knitting-needle. The needle is inserted about four-fifths of an inch from one of the lips of the wound, perpendicularly to the skin, and deeply, so as to take up a good thickness of the tissues. It is then carried under the floor of the wound, and brought out under the skin on the other side at the same distance from the edge. The ends of each thread are then drawn together and tied in a knot, care being taken to produce an extra approximation of both

the deep and the superficial parts. The *serre fines* are removed as the suture of the wound proceeds. When all the threads are drawn tight, the junction of the edges of the wound where it might gape a little, is completed by means of pins, and the whole is covered with a pledget of lint spread with ointment. Dr. Vibert has obtained, in about thirty cases to which he has applied this plan, firstly, immediate union completed from the eighth to the tenth day, when the conditions of approximation are favorable; secondly, a partially immediate union, entirely completed from the fifteenth to the twentieth day, in instances where part of the wound has not escaped suppuration; thirdly, a more tardy, but relatively shortened union, in cases where the gaping of the edges of the wound has only allowed them to be partly approximated.—*Brit. Med. Jour.*

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

"Judex damnatur cum nocens absolvitur."

CYCLOPÆDIA OF PRACTICAL MEDICINE. Edited by Dr. H. VON ZIEMSSEN, Professor of Clinical Medicine in Munich, Bavaria. Volume I. Acute Infectious Diseases. By Professor Liebermeister, of Tübingen; Professor Lebert, of Breslau; Dr. Hænisch, of Greifswald; Professor Heubner, of Leipsig, and Dr. Oertel, of Munich. Translated by R. H. Fitz, M. D., and Charles P. Putnam, M. D., of Boston; Arthur Van Harlingen, M. D., of Philadelphia; Jas. T. Whittaker, M. D., of Cincinnati, Ohio; Edward W. Schauffler, M. D., of Kansas City, and Francis Delafield, M. D., Horatio Bridge, M. D., Thomas Satterthwaite, M. D., Lewis A. Stimson, M. D., J. Haven Emerson, M. D., and Normand Smith, M. D., of New York. Albert H. Buck, M. D., of New York, Editor of American Edition. New York: Wm. Wood & Co., 27 Great Jones Street. 1874.

At the request of the distinguished German editor, Dr. H. von Ziemssen, of Erlangen, a number of the most distinguished clinical instructors of Germany have determined to prepare, in

fifteen serial volumes, a Cyclopædia of the Practice of Medicine. Physicians both in this country and Europe have long felt the need of a series of works which would furnish, from the pens of acknowledged masters, an accurate exposition of the present state of medical knowledge in the separate domains of pathology, etiology, symptomatology, and treatment. The most superficial student admits, that it is impossible to obtain this knowledge from ordinary "text-books" on Practice; for these at best are but summaries, often incomplete, of the facts demanded; and few have the leisure, the means, or the information sufficient to collect the exhaustive monographs which are rapidly issued from the European and American Medical Press. It is on account of these manifest truths that Cyclopædias of medicine are demanded, and it is in recognition of this demand that this Cyclopædia is published, both abroad and at home.

The great importance and value of this work have been so generally admitted, that one of the best publishing Houses in America, Messrs. William Wood & Co., of New York, have determined to issue a copy-righted American edition of it. The many advantages offered in the foreign edition will, it is promised, be faithfully given in this one; and as the translators, whose names appear in the caption of this review, are highly efficient and cultivated physicians, and as also the American editor, Dr. A. H. Buck, of New York, has charge of the work, it may be safely expected that physicians in this country will secure, in the American edition, all the material which appears in the German work.

This Cyclopædia is to be published in fifteen volumes, octavo; each volume to be about seven hundred pages in size. The work will be sold only by subscription, and on account of its extreme cost it will be impossible to furnish any one volume apart from the series. The importance and value of the whole work may be seen at a glance from this summary of the subjects to be presented: 1st volume, Acute Infectious Diseases; 2d. Acute Infectious Diseases; 3d. Chronic Infectious Diseases, 4th. Dis-

eases of the Respiratory Organs; 5th. Diseases of the Respiratory Organs; 6th. Diseases of the Circulatory Organs; 7th. Diseases of the Chylopoietic System; 8th. Diseases of the Chylopoietic System; 9th. Diseases of the Urinary Organs; 10th. Diseases of the Female Sexual Organs; 11th. Diseases of the Nervous System; 12th. Diseases of the Nervous System; 13th. Diseases of the Locomotive Apparatus; 14th. Diseases of the Skin; 15th. Toxicology.

These different volumes will be prepared by the following eminent medical scientists and practical physicians: Liebermeister, Lebert, Heubner, Hænisch, Oertel, Hertz, Curschmann, Zueizer, Heller, Weber, Ziemssen, Steiner, Frænkel, Jurgensen, Rindfleisch, Wagner, Zenker, Merkel, Schrader, Nothnagel, and many others equally distinguished.

The first volume of this great work has appeared for several months, and is now being rapidly purchased by the earnest students, old and young, of this country. Its importance may be, to some extent, inferred from an inspection of the caption of this review, where it will be seen that, as is unusual in this Journal, the whole title page is carefully presented.

The subjects selected for this volume are as follows: The Plague and Typhoid Fever, by Liebermeister; Yellow Fever, by Hænisch; Asiatic Cholera, Typhus and Relapsing Fever, by Lebert; Dysentery, by Heubner, and Diphtheria, by Oertel. The reader will see that even in this arrangement of subjects, there is conspicuously expressed the decision of these great authorities in regard to disputed points in etiology and pathology; and he intelligently anticipates much of the fields which he is about to enter, with the convictions of those in charge of them, when he finds that typhoid fever, dysentery, cholera, yellow fever, and diphtheria, are all classed as acute infectious diseases.

As these articles have all been revised by the distinguished German editor, Ziemssen, one is necessarily more or less influenced by them, as he appreciates the ability of the revising editor for the delicate task and difficult duty imposed upon him.

The correctness and importance of the views presented and sanctioned by the revisory power, will of course form the subject of close thought on the part of the reader; and he must logically and materially be influenced in his decision as to their value, just as he is more or less informed as to the fitness of the editor for the performance of so high and important a duty. That Ziemssen is eminently fitted for the high position of revisory officer, no one even superficially familiar with his record can doubt. He is now in the zenith of mental and physical vigor, being about forty-six years of age. He was educated at the great medical schools of Berlin, Würzberg and Griefswald, having spent five years of his life in these great didactic and clinical Institutions. Since 1856, he has been a teacher of medicine both at the bedside and in the lecture-room, and after nearly twenty years of such service, he is now in charge of the Chair of Clinical Medicine at the University of Munich. As a student, teacher and worker, he has been eminently successful. As an author, his versatility and triumphs have been even more remarkable, for he has in a comparatively few years contributed most valuably to medical literature; the number of these contributions is really wonderful; some of the titles of them will be familiar to the reader: Electricity in medicine; paralysis of the cranial nerves; artificial respiration; local treatment of the stomach; diaphoretic treatment of dropsy; paralysis of the vocal cords; laryngoscopy and laryngo-therapeutics; studies in dermatology; lead poisoning with paralysis from the use of snuff; variations in electric irritability; physicians of the middle ages; epidemic cerebro-spinal meningitis; pleurisy and pneumonia in childhood; etiology of uterine tumors; relations of temperature, etc., etc.

Such a record, with such results, and such a position at present, surely indicates that Ziemssen, as a revisory officer, brings to the performance of his task an ability, experience and judgment rarely equaled, and seldom indeed surpassed.

The first article, on typhoid fever, is, as it deserves to be, one of extreme elaboration; and as an analytical exposition of the

subject, it is one of the most creditable in the medical library.

In introducing the subject of typhoid fever to the reader, the following remarks in regard to infectious diseases are especially excellent: "Under the name of infectious diseases, we group together those affections which we know, or at least believe, must originate through the infection of the system with certain peculiar poisonous matters, and which are mainly distinguished from the ordinary poisons by the fact, that they can reproduce themselves, under favoring conditions, to an endless degree." Comprehended in this group are three other subordinate groups mentioned by the author; contagious diseases, miasmatic diseases, and miasmatic contagious diseases.

Very valuable facts are given by the author for the purpose of thoroughly separating typhoid from typhus fever, and it is clearly shown that much of the old antagonistic testimony in relation to the therapeutics adopted in typhoid fever was simply due to the confounding of these two absolutely distinct diseases.

The pathological analysis of typhoid fever is masterly, indeed, and the author leaves little apparently to be contributed by others; the lesions of the lymphatic glands of the intestinal canal, of the mesenteric glands, of the spleen, all due to the specific effect of the typhoid poison, are handsomely elaborated. The results of the general disease upon the parenchymatous structures are thoroughly presented, and the changes produced in the liver, kidneys, heart, and voluntary muscles, have received the most minute attention.

In regard to the etiology of typhoid fever, the author writes with extreme care and caution; while admitting its spontaneous origin, he evidently believes in the germ theory of causation, and that the disease prevails chiefly, if not always, when this germ obtains a favorable nidus. He is, if not a follower of Dr. William Budd in this respect, at least a supporter of him, and takes the very opposite of the views of Murchison to the effect that the disease arises often from defective drainage, foul sewage, etc. The contagiousness of the disease he

doubts, believing that those handling typhoid fever patients do not oftener suffer than others of the community not exposed to the disease. In this respect, the author repudiates the most convincing testimony to the contrary. That the disease originates spontaneously very often; that it is propagated most readily when the typhoid poison finds a favorable nidus; and that the disease is not infrequently contagious, very few will at the present day deny.

As to the symptomatology of the fever, the author writes most acceptably and valuably. His thermometric curve charts are thoroughly demonstrative of the recent claim that colorification attains its maximum through a series of thermic grades, which, as a rule, show the attainment of one degree increase for each day of the disease, until the commencement or middle of the second week; when, after morning and evening fluctuations, with the attainment of no higher thermic register, the temperature gradually falls through the fourth week, until the normal temperature is again reached. The intestinal, nervous, glandular, and cutaneous symptoms are depicted with rare fidelity and accuracy.

The author shows very satisfactorily the untenability of the assumption that intestinal hæmorrhage is to be regarded as a favorable element in prognostic consideration; and, indeed, it is remarkable how such an impression can be entertained. That Graves and Trousseau, Piedagnel and Clutterbuck, Armstrong, and a few others, entertained this view, is admitted, but that the testimony of the Profession is opposed to it, few can doubt. Indeed, Stokes, in reporting recently a rapidly fatal and painless case of typhoid fever, dwells upon the fact that the hæmorrhage was not only copious and persistent, but that it was the evident cause of death. That a patient in such a disease can be benefited by the loss of what he most needs—blood—is improbable indeed, if not impossible.

As should be the case, very much of the author's space is devoted to a consideration of the treatment of the disease. Strangely enough, he is as thoroughly convinced of the efficacy

of large doses of calomel as was ever Hamilton, Grattan, Traube, Wünderlich, or Wolff. He gives calomel freely in scruple doses, and believes that the disease is not only mitigated, but curtailed in duration. Few physicians of the present day would sustain such views, and they are strikingly different from those now favorably advocated in the London hospitals, where milk diet, with the withdrawal of medicines, seems to give the best results. The old treatment of Currie, that of the cold bath, is strongly advocated, and the author is evidently much influenced by the testimony published in connection with the treatment of typhoid fever during the Franco-German war. That many were killed by it is now admitted, and the conservative are far more disposed to rely upon cold or tepid sponging, than upon the cold bath or cold affusion. Very properly, the author has no confidence in the abortive treatment of the disease; venæsection, emetics, chlorine water, mineral acids, etc., etc., so long claimed as specifics, he repudiates. Nor has he any confidence in the use of quinine, even in the largest doses, for aborting the fever. When the heart yields, he relies much upon it, and also upon digitalis. Sauer's famous treatment by the iodide of potassium is regarded as of no special value. His sheet-anchor is what is termed the anti-pyrectic treatment, cold baths, cold affusion, cold sponging, digitalis, and veratrum. Quinine is used not as an abortive, as recommended of old by the French, and recently by Vogt, but for its specific effects; he gives seven grains every ten minutes until forty-five grains have been received, and then gives no more for two days. It must be confessed that there is more of fancy and whimsicality than demonstrated scientific deduction in such treatment. The once favorite German treatment, the use of nitrate of silver, is not mentioned. American, English, and French physicians receive neither compliments nor justice. The paper, in authorship, literature, pathology, treatment, etc., is German and German only; highly scientific, but not sufficiently comprehensive in its literature, not generous, and certainly not just. But such as it is, all will value it most highly.

The article on Typhus, by Lebert, is very valuable.

The article on Cholera, by Lebert, is incomparably the most complete and exhaustive recently published. In the bibliography, history, etiology, and course of the disease, the question of local influence, malaria, etc., does not receive the respect of even cursory attention. If the author resided in America, he would be unquestionably regarded as an ignoramus of the first degree, and be assailed in the columns of every newspaper whose editor was weak enough to give space to such paltry and silly effusions. The propagation of the disease by air, water, clothing, excreta, atmospheric germs; along the avenues of marine and railroad transportation; by the cholera dead, etc. etc., is elaborated with great force and power. Those who are wedded to the idea of a malarial etiology of cholera will turn positively green when they read the following law: "Cholera can be spread only by contagion."

As to the treatment, there is nothing of special value; indeed, this portion of the subject is unsatisfactorily presented. The author is wedded to opium, but of its notorious danger in the second stage, he says nothing; when it is known that during this period of suspended gland action, the blood becomes loaded with cholesterine, urea, the excrementitious elements removed through the skin, etc., and that when on the resumption of gland action and absorption, the accumulated opium (foolishly or empirically given) intensifies the danger from all of these blood poisons, it is marvellous not only that opium should be so often recklessly prescribed and recklessly defended (by certificates given by physicians to nostrum dealers), but that in a scientific treatise like this of Lebert, these dangers, so well known to thousands of scientific men, should not have been clearly indicated and fully explained.

Yellow fever is regarded as eminently infectious. The paper is fully worthy of study.

The article on the Plague has more of a literary and historic than a practical interest. It will, however, be prized for the purposes of reference.

The article on diphtheria is one of great value. It demonstrates clearly the error of confounding this disease with croup, and the evidences given of the non-identity of the two diseases are overwhelming and conclusive. While Trousseau in France, Jenner and Johnson in England, Wagner in Germany, and many others prominent in these countries, have endeavored to show an identity of croup and diphtheria, it must be admitted that the researches of Greenhow, and Hueter, Trendelenburg and Nassiloff, Virchow and Recklinghausen, Eberth, Klebs, Waldeyer, Oertel, etc., etc., have demonstrated an absolute difference in the two diseases. Indeed, there is but one phenomenon which is common to the two troubles, that of a membrane formed in the air passages; and when this membrane is examined, it serves to show as much as any other morbid manifestation how utterly distinct are the two diseses. Its composition, mode of attachment, and the sequels of removal are radically different. Indeed, Jenner, Trousseau, Wagner, and others, might, with as much justness and correctness, claim an identity of diphtheria and scalded larynx, because of the similarity of the membrane formed, as to urge that similarity of the croupal and diphtheritic membrane indicate an identity of croup and diphtheria. Who could claim an identity of the variolous eruption and that produced by the use of tartar emetic, because these eruptions resembled each other? Oertel elaborates the differences between these two diseases with much force and ingenuity. One can not read, with any care, either the semiology or symptomatology, the history or sequels of croup and diphtheria, without being surprised that they should ever have been even classified together.

As brief as has been the allusion to the varied points of interest and value in this, the first volume of Ziemssen's Encyclopædia, enough has been furnished to show that this new work is to be one of the greatest contributions ever made to the literature and practical researches of medicine. The Publishers are issuing it in the very best manner, and deserve a full and generous support.

MEDICAL NEWS.

'Nulla dies sine linea."

AMERICAN MEDICAL ASSOCIATION.—The Twenty-sixth Annual Session will be held in the city of Louisville, Ky., on Tuesday, May 4, 1875, at 11 A. M.

"The delegates shall receive their appointment from permanently organized State Medical Societies, and such County and District Medical Societies as are recognized by representation in their respective State Societies, and from the Medical Department of the Army and Navy of the United States."

"Each State, County and District Medical Society entitled to representation shall have the privilege of sending to the Association one delegate for every ten of its regular resident members, and one for every additional fraction of more than half that number; provided, however, that the number of delegates for any particular State, territory, county, city, or town shall not exceed the ratio of one in ten of the resident physicians who may have signed the Code of Ethics of the Association."

"The Chairmen of the several sections shall prepare and read in the general session of the Association, papers on the advances and discoveries of the past year in the branches of science included in their respective sections. * * *"—By-Laws, Article 2, Section 4.

SECTIONS.

Practice of Medicine, Materia Medica, and Physiology—Drs. Austin Flint, Sr., New York, Chairman; J. K. Bartlett, Milwaukee, Wis., Secretary.

Special committees appointed to report to this Section. On Meteorological Observations—Drs. J. M. Toner, Washington City, Chairman, J. J. Woodward, U. S. A., E. Lloyd Howard, Maryland.

On Clinical Observations—Drs. N. S. Davis, Illinois, Chairman, H. A. Johnson, Illinois, J. B. Johnson, Missouri.

Obstetrics and Diseases of Women and Children—Drs. W. H. Byford, Chicago, Chairman, S. C. Busey, Washington, Secretary.

Special committees to prepare business for this Section—Drs. M. A. Pallen, New York City, Chairman, L. F. Warner, Massachusetts, J. K. Bartlett, Wisconsin.

Committees appointed by the above. On Unusual Fœtal Presentation—Dr. J. A. Octerlony, Kentucky.

On Retroversion of the Uterus in the first five months of Pregnancy—Dr. Heaton, Michigan.

On the Connection of the Hepatic Circulation with Uterine Hyperæmias, Fluxions, Congestions, and Inflammations—Dr. L. F. Warner, Massachusetts.

On the Relation of Menstruation during Lactation—Dr. S. C. Busey, District Columbia.

Surgery and Anatomy—Drs. E. M. Moore, Rochester, N. Y., Chairman, T. S. Latimer, Baltimore, Secretary.

Committee to report to this Section. On the Treatment of Fractures—Dr. Lewis A. Sayre, New York City, Chairman.

Medical Jurisprudence, Chemistry, and Psychology—Drs. Jerome Cochran, Mobile, Chairman, G. A. Moses, Saint Louis, Secretary.

State Medicine and Public Hygiene—Drs. H. I.Bowditch, Boston, Chairman, H. B. Baker, Lansing, Michigan, Secretary.

Committees to report to this Section. On Ventilation of Dwellings, Schoolhouses, and other Public Buildings—Drs. R. C. Kedzie, Michigan, Chairman, A. B. Stuart, Minnesota, R. J. O'Sullivan, New York.

On Form of Bill to Establish a National Department of Public Health at Washington—Drs. H. B. Baker, Michigan, Chairman, H. A. Johnson, Illinois, J. M. Toner, Washington.

On what Legislative Action, if any, can be taken to enforce by law an examination of all persons who enter upon the Practice of Medicine and Surgery, by a State Board of Medical Examiners—Drs. Foster Pratt, Michigan, Chairman, S. G. Armor, New York, D. W. Yandell, Kentucky.

"Papers appropriate to the several sections, in order to secure consideration and action, must be sent to the Secretary of the appropriate section at least one month before the meeting which is to act upon them. It shall be the duty of the Secretary to whom such papers are sent, to examine them with care, and, with the advice of the Chairman of his Section, to determine the time and order of their presentation, and give due notice of the same. * * * *"—By-laws, Article 2, Section 5.

The following Committees are expected to report: On Cultivation of the Cinchona Tree—Dr. L. J. Deal, Pennsylvania, Chairman. On some Diseases Peculiar to Colorado—Dr. John Elsner, Colorado, Chairman. On American as compared with Foreign Winter Cures—Dr. H. R. Storer, Massachusetts, Chairman. On Railroad Injuries—Dr. W. F. Peck, Iowa, Chairman. On proper Legislation to Prevent the Spread of Syphilis—Dr. S. D. Gross, Pennsylvania, Chairman. On the Use of Pessaries—Dr. John Morris, Maryland, Chairman. On Cystic Degeneration of the Kidneys—Dr. John A. Octerlony, Kentucky, Chairman. On the Diseases of Minnesota and the Northwest—Dr. D. W. Hand, Minnesota, Chairman. On Prize Essays—Dr. John Davies Jackson, Kentucky, Chairman. On Necrology—Dr. S. C. Chew, Maryland, Chairman. On Rank of Medical Department of the Army—Dr. J. M. Toner, Washington, Chairman. On International Medical Association—Dr. J. M. Toner, Washington, Chairman. On Memorial on Dr. Henry Miller, deceased—Dr. S. D. Gross, Pennsylvania, Chairman. On Memorial on Dr. Mendenhall, deceased—Dr. J. A. Murphy, Ohio, Chairman.

The following amendments to the Plan of Organization are to be acted upon:

By Dr. H. B. Baker, Michigan—"The officers of the several Sections shall be nominated by the Section in and for which said officers are to serve."

By Dr. Adams Jewett, Ohio—"The permanent members shall consist of all those who have served in the capacity of delegate, and of such other members as shall have received the appointment by unanimous vote, and of all others who, being members in good standing of any State or local Medical Society entitled to representation in this Body, shall, after being vouched for by at least three members, be elected to membership by a vote of three-fourths of the delegates in attendance, and shall continue such so long as they remain in

good standing in the Body of which they were members when elected to membership in this Association, and comply with the requirements of its by-laws."

Secretaries of all State Medical Societies that have adopted the Code of Ethics are respectfully requested to forward to the undersigned a complete list of officers, with their post-office addresses, of those County and District Medical Societies entitled to representation in their respective bodies. This is the only guide for the Committee of Arrangements in determining as to the reception of delegates. It will also enable the Permanent Secretary to present a correct report of Medical organizations in fellowship with the Association.

Wm. B. Atkinson, M. D., Permanent Secretary.

Philadelphia, Pa.

The Kentucky State Medical Society will meet at Henderson, Ky., April, 6, 1875. Arrangements have been made with railroad and steamboat lines for a liberal reduction of their regular fare—viz., round trip by Louisville and Henderson packet, $9; round trip by Nashville railroad, $10.——*Trichinæ*, according to a Nordhausen paper, have recently been found, on microscopic examination, for the first time, in the flesh of a wild boar. Hitherto, it has been believed that these parasites infected the domestic pig alone.—*Ex.*——*Action of Salicylic Acid in Bacteria.*—Dr. Ludwig Letzeritz has lately tested the effect of salicylic acid on bacteria and micrococci, by placing under the microscope portions of fluid containing the organisms in abundance, and allowing solutions of salicylic acid to come into contact with them. He used solutions of four degrees of strength—viz., one part of salicylic acid and one of spirit, in 120, 30, 60, and 40 parts of water. The first two (weaker solutions) arrested the movements of the bacteria gradually; while, with the two stronger solutions, the arrest of movement was instantaneous. He had used salicylic acid locally and internally in two cases of diphtheria, he thinks with good effect; but he observes that more extensive observations are necessary in order to determine its value in this disease.—*Brit. Med. Jour.*——*Hydrophobia in Denmark.*—A correspondent of the "Pall Mall Gazette," writing from Copenhagen, directs attention to the fact that rabies exist to an alarming degree in nearly all the towns of Jutland. As a

proof of the feeling in Copenhagen on this subject, he mentions that the Press is insisting upon the necessity that the Minister of the Interior should by a short bill make it an offence for any one to bring a dog from Jutland to any of the islands, thus trying to limit this terrible scourge to the Peninsula, whether it has been brought, to all appearances, from Germany, and especially Berlin, where rabies existed a short time ago to an alarming extent. There is hardly a day when the Danish papers do not cite one or more cases; and several people have already died from this terrible disease.—*Ibid.*———*Mr. William Colles*, ex-President of the Royal College of Surgeons in Ireland, Surgeon to Stephen's Hospital, has been elected to the Professorship of Surgery in the University of Dublin.—*Ex.*———*The University of London and State Medicine.*—At a meeting of the Senate of the University of London, held on the 10th, the propositions in the Report of the Committee on Examination in Medicine respecting the examination in State Medicine were accepted.—*London Lancet.*———The total amount of collections raised in Liverpool on Hospital Sunday, January 10th, and on Hospital Saturday, January 16th, in aid of the charities of the town, amounted to £9,300.

EDITORIAL.

"Nullius addictus jurare in verba magistri."—Hor.

NEWSPAPER CHARLATANS.—By a singular coïncidence, the last issue of the New York "Medical Record" and the "American Medical Weekly" each contained an editorial upon the subject of newspaper charlatans. As there was no concert of action, and not even any communications exchanged in this connection, it is evident that this evil is wide-spread, and attracting the gravest consideration. Many regard the prohibitions in regard to newspaper advertising, as expressed in that

code of laws which every reputable physician respects, or should be made to respect, as entirely too severe. The code of ethics, it is said by many, should allow something more than the mere announcement of location or a change of location; that it is unreasonable to exclude the physician so absolutely from the daily Prints. This plea has been wide spread, and of late years it has practically met with this very favorable response, that physicians use the daily papers under a variety of circumstances, and yet escape the censure of medical organizations. If any one doubted the wisdom and prudence of Dr. Percival (when writing the medical code of ethics) in restricting, as he did, the use of newspapers for professional advertising, those doubts should, in recent years, certainly cease. In no relation can one more thoroughly appreciate the wisdom of Ovid, as expressed in his classic injunction, "Principiis Obsta" (check the disorder at the outset), than when tracing the results of the extreme leniency of the Profession towards those physicians who violate the letter and spirit of the law in regard to newspaper advertising. To-day, physicians advertise practically without limit or censure, provided they use some ingenuity in appearing in the text columns of the newspaper, and not in those devoted to advertisements; and provided also that they enjoy some little local or general influence, and do not belong to the unhappy army of professional strugglers for bread; who, if under the pressure of want violate the law, are remorselessly crucified, and publicly held up as a warning and example. To those who do not know how to advertise, this brief advice is gratuitously given; leave the city for a few days and drop the announcement of the fact in the editor's box; return soon, and repeat this ingenious device; change your office twice a year, and advertise each removal for six months; if called to see some wealthy or influential citizen, remember the editor's box; drop into this the daily bulletin of the patient's condition, and add a few words in regard to his distinguished medical attendant, concealing the name; in a few days, announce that it has at last been discovered who the sick

man has had the good fortune to secure; modestly write your own name, and also, of course, your address. Compile from the library a heavy article on some disease, introducing the names of a great variety of unfamiliar authorities; have a reporter present and arrange to have the article "solicited"; if it costs wine and cigars, why, the price paid is less in amount and better expended than that charged for the use of those odious advertising columns. If going to the State Society, arrange to have the paper read by you appear in the daily papers on the day after it is read, at the distant meeting; and drop in the editor's box a sweet paragraph, to the effect that "the celebrated Dr. Sly has gone, by invitation, to read a paper before a distant Society, and his many admirers and friends will be gratified to find this valuable contribution to science in to-day's issue; something not allowed usually by the Profession, but which the distinguished author consented, after much importunity, to have published."

This is very effective. When the paper is accepted and becomes the property of the Society, do not notify the newspaper editor, but express regret that you did not anticipate the handsome action of the Society in requesting it for publication. This is all infamous, of course, but it is very common, and none but those who read such actions readily will look beyond the surface. Be sure and have "the advance sheets of the Transactions" sent to the newspapers, and have it conspicuously announced, that "the enterprising editors have forestalled the Committee on Publication, in giving this remarkable production to a grateful Public." Many simpletons will be deluded, and really believe that the newspapers are to blame for making you involuntarily a transgressor of the medical law. Ask the Principal of the nearest "High School" why he does not have some of the Medical Faculty lecture to the boys or girls. If he takes the hint and requests you to oblige him, accept with reluctance, etc., but give the notice with celerity to the newspapers.

And so, if space allowed, the paltry subterfuges used by the newspaper charlatans of the medical profession could be, one

by one, exposed. But why do this; surely none but the simplest of the simpletons are unfamiliar with these comic yet contemptible devices. The unsuspecting rustic may believe that the newspaper man is everywhere; omnipresent, and omniscient. But surely one must be steeped in stupidity not to understand how the reporter obtains these affecting and effective little paragraphs; how all this ingenious and dishonorable newspaper advertising is effected by physicians.

It is worse than useless for those thus appearing to pretend that such advertisements are without their knowledge and consent; they only thus add falsehood to fraud. Every physician, even the most distinguished, may remain perpetually unheralded, unnoticed in the Newspaper Press, if he so desires. The best physicians, those professionally accomplished and personally true and honorable, never make their appearance on this stage. Every newspaper editor respects, and will respect a request honestly and earnestly made by a physician, that his name be not published in the secular Press.

Comment without cure is as bad as Sir Henry Chambers' clinical lecture on symptoms, with the omission of the prescription. The remedy for terminating this newspaper disease, now destroying the Profession, is simple and radical. Let it be demanded by professional sentiment, if not by professional legislation, when a physician's name is made to appear in a newspaper without his knowledge or consent, that he on the next morning, or soon thereafter, put in an advertisement that he was advertised without his knowledge, consent, or coöperation. Make this a requirement of the physician, and the offensive nuisance, now so injurious and disgusting, will at once disappear. State Societies are now about to meet; the slightest legislation to this effect will cure a tremendous evil, and consign to deserved obscurity those contemptible creatures, the newspaper charlatans. If this is not sufficient, there is a sure remedy; bulletin the trangressors in the pages of the Medical Press, and show them to be what they are, the pariahs of the Medical Profession.

RICHMOND AND LOUISVILLE

MEDICAL JOURNAL.

VOL. XIX. MAY, 1875. No. 5.

ORIGINAL COMMUNICATIONS.

"Qui docet discit."

ART. I.—CASES ILLUSTRATING THE DIRECT ACTION OF REMEDIES ON THE NERVOUS SYSTEM. By FREDERIC D. LENTE, M. D., of Cold Spring; Member of the Council of the New York Neurological Society, etc., etc.

CASE I.—This case occurred last Summer, and as I kept no notes, I must depend on the report of my friend, Dr. S. P. Church, who called me in consultation, and with whom I saw the patient, day after day, as long as the danger was imminent.

The age of the child was fifteen months. Some weeks before the recent severe illness, she had had measles, which had been prevailing in New York in a severe, and in some cases, a fatal form. The prominent symptoms, says Dr. Church, were cough, high fever, rapid respiration (ranging at one time to 80); pulse 125 to 135 (at one time 180); head hot; great restlessness. The child continued to grow gradually worse, and a thin, greenish diarrhœa was added to the other symptoms. I first saw the little patient on the 2d of April, six days after Dr. Church was called in. The child had been in an unconscious state for some time previous to my visit; possibly a couple of days or more. The pupils were much contracted, although no opiate, in sufficient dose to produce such a condi-

tion, had been given; there was evidently no vision; pulse 130, and very feeble; respiration frequent; temperature 105° in axilla. Swallowed fluids with avidity, and of course took a sufficiency of nourishment. Bromide of potassium in doses of three grains every two hours (thirty-six grains in twenty-four hours) was ordered, in addition to the remedies already prescribed. The next day, April 3d, at our consultation, matters had not mended, and I advised the attending physician to abandon the routine treatment of such cases, and try remedies which would act directly on the nerves supplying the capillaries of the brain, thus causing their contraction and a diminished supply of blood. Accordingly, we ordered the bromide to be continued as before; Squib's fluid extract of ergot in m. ijss. every hour, with one-quarter of a minim of tincture of belladonna every hour. The latter to be continued until a manifest dilatation of the pupil was observed. At our next visit, April 4th, the child's symptoms were all decidedly improved. The father, a very intelligent gentleman, had watched the effect of the belladonna, and observed that as soon as dilatation of the pupil was decided, the child seemed to manifest some consciousness, and became more quiet; the pulse was less frequent, and fuller; the temperature 103; the child less restless, and the diarrhœa checked. The belladonna was now directed to be given pro re nata, so as to maintain the pupil in a natural state; the other remedies to be continued as before. I do not endeavor to give the daily details of the case, as the progress was perfectly uniform; the intelligence of the child, from its dawn, the first morning after commencing the treatment, continued to exhibit slow but gradual and progressive development from day to day, first noticing familiar objects, in a languid way, then raising her little hands to seize them, and letting them fall from sheer weakness. The temperature and pulse continued to improve *pari passu*, and the heat of head diminished; the diarrhœa did not return, and the discharges assumed a healthy character within twenty-four hours after the treatment was commenced. The belladonna was continued at inter-

vals of two, three or four hours, for four days; the ergot was continued in the same doses, and at the same intervals as at first, for five days; as was also the bromide. At this time there was an apparent relapse; this was the information I got from the parents on the morning of my sixth visit. On examining the child, I found that the restlessness had increased; the pulse had run up to 120 and 130, was decidedly more feeble; child more languid, but perfectly conscious; temperature below 98°; head preternaturally cold. The parents, under the impression that the small amount of stimulant, which had been given for two or three days, was doing harm, had intermitted it during the night. It was evident that the constringing effect of the remedies on the capillaries had been pushed too far, and the stimulant not far enough. The former were all stopped at once, and the stimulant decidedly increased, and codeia was ordered to allay restlessness. The next day the child was like a different patient. The cough, which had all along, indeed ever since the attack of measles, been more or less troublesome, was considerably allayed by the codeia; and in addition, we now directed cod-liver oil in emulsion, and the child continued to improve gradually until the cough disappeared, and Dr. Church now writes that she is entirely well.

I think the above case needs no comment, I would only call attention to the fact that the diarrhœa was checked, and the characteristic greenish evacuations converted into healthy very promptly, after failure of the ordinary remedies which had been employed. This was no accident, I have observed it before in treating cases for fibrous tumor and other diseases with ergot. And we know that belladonna also has the effect of relieving both diarrhœa and constipation; that is by restoring a healthy tone to the capillary circulation of the intestinal canal. Bromide of potassium is also relied upon by some physicians to fulfill the same indications.

CASE II.—While upon this subject of the action of remedies on the nervous system, I am induced to present another case in illustration, but of a totally different character in every

respect, which fell under my care about the same time—that is, in the early part of May last. The subject was the widow of a well-known physician of New York, not long deceased. She is nearly eighty years of age, usually in good health, but has had several severe attacks of disease, one affecting the chest, a year ago, of an alarming character, for which she was attended by her physician, my friend, Dr. Leaming. She had been ailing slightly with a cold, and some cough; when, one day, on returning from a ride, during which the weather had turned colder, was attacked with sudden dyspnœa; and her daughters noticed that her finger-nails turned blue, and her lips and face became also somewhat livid. I was immediately sent for, but did not arrive until 9 o'clock in the evening, when another messenger had been dispatched for me. On my arrival, I found that the very urgent symptoms had temporarily subsided. But it was evident that I had to deal with a case of general capillary bronchitis, and that some remedy which would afford speedy relief was absolutely necessary. Only one remedy presented itself to my mind as likely to meet the emergency, and it is probably the last one which would have presented itself to the minds of most physicians of the present day. I placed thirty grains of *calomel* on her tongue and let her wash it down with a draught of cold water. She was taking a very mild expectorant mixture of muriate of ammonia and ipecac, which had been prescribed for her grandchild, three years of age; and I let her continue this as a placebo. The next morning I was at the house as early as possible; found that, at 12 o'clock, two hours after taking the dose, she fell into a quiet slumber, and slept for four hours. The medicine then operated three or four times very gently, the evacuations being of a normal appearance. She was greatly relieved, and although she was confined to the bed for several days, she had no recurrence of any serious symptoms, and took very simple remedies.

To those whose attention has never been called to the sedative action of calomel in disease, this practice must seem extraordinary. But I hope that enough has been said on the subject

within the past few years to convince some, at least, that the action of this potent remedy is totally different on the nervous system, according to the mode in which it is prescribed. Doses of one grain every hour in this case, or a dose of five or ten grains would undoubtedly have disturbed the stomach and alimentary canal unpleasantly, and have aggravated the disease by adding other sources of irritation. But, like the remedies prescribed in the preceding case, it acted through the ganglionic system on the minute vessels of the parenchyma of the lungs, checking the inflammation at once, and probably saving the patient's life. For no more dangerous form of disease can attack a very old or a very young subject. So it acts in Asiatic cholera, in dysentery in its worst or epidemic form, in membranous croup, and many diseases in which danger is imminent; and the number of available resources from which we may choose, are very few indeed. The first physician whom I have ever known to prescribe the sedative dose of calomel in these desperate conditions of thoracic disease, was Dr. Cammann, the proposer of the binaural stethoscope. Dr. Leaming, once his assistant, followed his treatment in some cases; and in the case of this very patient, as she subsequently informed me, relieved her almost like magic, as she expressed it, with calomel placed on her tongue; how much, I know not; but certainly a sedative dose. In dysentery, in cholera, in croup, the remedy acts too quickly (in fifteen minutes sometimes) to be explained through any other medium than a direct influence on the nervous system.

I present the three following cases as additional evidence of this action, and of the correctness of the views on this subject expressed in part first, of this paper. I am indebted to Dr. J. R. Leaming for the notes of the first two.

CASE III.—Saw this case in consultation; daughter of Mr. P.; four years and a half old; had been ill one day. May 18, 1872, 3 P. M., found her moaning, apparently suffering great pain; head moving up and down, and from side to side; pupils dilated; apparently in great pain; seemed to be unconscious;

could probably neither see nor hear; pulse very frequent. We diagnosed cerebro-spinal meningitis. Twelve grains of calomel were placed upon her tongue. 9:30, motion of head much less; answers when spoken to; pulse less frequent; temperature lower. There was some stiffness of the back of the neck; an approach to opisthotonos. The characteristic eruption fully developed. From this time improvement was rapid, and convalescence established.

The above particulars were given from memory, and some months after the occurrence of the case.

CASE IV.—Saw Mr. V. B., in consultation with Dr. Kissam, of New York, December 13, 1872; had previously had two attacks of cerebral compression, with an interval of several years. At this time, he again became unconscious, and fell. After a couple of days, signs of thoracic inflammation became manifest. It was at this juncture I was called in. Breathing oppressed; pulse 60 and feeble. Plastic râles over lower part of both lungs, mostly in right side; pericardial pleural râles could be distinguished. Small doses of blue mass and extract of conium were prescribed, with external stimulating applications.

December 14th.—Patient apparently better.

December 15th.—Symptoms much worse; urgent dyspnœa. It was found that the plastic interpleural exudation* had increased, with the addition of pericardial friction, to and fro movement. It was concluded, in consultation, to do what was not done at first, on account of the weakness and slowness of the pulse—that is, to give him a sedative dose of calomel. Consequently, thirty grains were placed upon his tongue. The next day the pleural râles were greatly diminished, and the pericardial friction murmur had disappeared. Pulse stronger. In the course of two or three days the plastic râles had disappeared, and, with the exception of the cerebral trouble, the patient had recovered.

* Dr. Leaming, as many of the Profession are aware, regards the râles, attributed by most of us to mingled air and moisture within the lungs, to plastic deposit on the pleuræ.

CASE V.—*Pneumonia Apparently Arrested by a Sedative Dose of Calomel.*—D. M., the father of the child, whose history will presently be related, aged forty, while running about in the rain to get necessary articles for his sick child, took cold, had a violent chill November 29, 1874, followed by fever, severe pain in the right side and shoulder, with severe "stitch" in breathing, also pains "all over," and cough. At the date of my visit, 30th, had not noticed his sputa. On physical examination, find marked dullness, right side, posteriorly over middle and lower lobe; respiratory murmur distant and muffled; no râles; temperature 100½°; pulse 90. Appears to be suffering a great deal. Diagnosis—pleuro-pneumonia, perhaps accompanied by intermittent fever, as his family have been much affected by it. Gave 30 grains of calomel on the tongue, and 8 grains of quinine to be taken in an hour, and the same dose six hours after.

December 1st.—Rather better, except headache; temperature and pulse the same; physical signs just the same; but expectorates well-marked rusty sputa. Says he felt better very soon after taking the calomel, but not so well after the other powders. The calomel commenced acting twenty-five minutes after it was taken, and operated four times mildly. No disturbance of bowels since; evacuations very dark. He vomited slightly once after the second quinine powder, eight hours after the calomel. To take ant. tart., gr. 1-16, q. 2 h.; small doses of morphine, if needed (gr. 1-20); turpentine stupes to right side of chest.

December 8th.—Have not been able to see the patient until to-day. Four days since, he sent a message to the effect that he felt well, but had a troublesome cough. He was ordered "Cammann's mixture," a tonic expectorant. To-day, find him looking and feeling well enough to go out. Cough much better. Says he noticed the peculiarity of his sputa for two or three days, and that it gradually disappeared. There is now only a shade of dullness over the lower lobe. The respiratory murmur is good, but still "muffled," as if from pleuritic fibrinous effusion; no râles.

December 10th.—Patient came up to the village (five miles) to-day. Feels well, but is weak; is, however, rapidly gaining strength as he exercises. Examined carefully by Dr. J. C. Young and myself; find the same physical signs.

In this case the pneumonia was probably central, and evidently did not pass through its ordinary stages.

CASE VI.—*Convulsions in Children Threatening Immediate Death Treated by the Hypodermic Injection of Morphia.*—A girl, aged three years, child of D. M., seized suddenly with convulsions November 28th, at 1 P. M. I saw the child at 5 P. M. The convulsions have continued uninterrupted and severe. They affected first one side, then the other, then both at once. Pupils now widely dilated and immovable, pulse feeble and irregular, estimated at 180; mucous râles in throat, and frothy mucus flowing from nose occasionally; respiration about 50. The head was thrown back, the spine in a state of opisthotonos, the bowels greatly distended with gas. On Thanksgiving day she had eaten freely of nuts, but had had febrile symptoms every afternoon for several days previously. The mother, the day before the attack, had given a dose of oil, and the child passed a quantity of fragments of chestnuts this morning. The convulsions were, therefore, probably due to abdominal irritation, and perhaps also to malaria. No time was to be lost. I immediately gave two minims and a half of a solution of morphia and atropia, and immediately followed it by chloroform inhalation. Within fifteen minutes the convulsions had ceased; but, for a few moments, the mucus flowed so freely from both nose and mouth, that the issue appeared doubtful. By turning her on her side, she soon breathed easier, and so did I. The pupils contracted down in a few minutes to less than their normal size, and the face was much flushed. The pulse improved, and the respirations were 44. I then injected about a quart of warm water into the bowels, and as no response followed, and having no long tube at hand, I introduced a long female silver catheter, and a large quantity of fluid and gas were evacuated. I left this *in situ*, and within half an

hour the belly was very much reduced in size. I then applied flannel turpentine stupes to the whole abdomen and epigastrium; and, as soon as I could get the teeth apart with the handle of a tooth-brush, placed upon the tongue a few grains of calomel rubbed up with sugar ("saccharated calomel"). The temperature was now noted at 102°. In half an hour, the carpo-pedal spasm was noticed returning, and the limbs stiffening occaisonally, and the opisthotonos increasing. I therefore injected another minim of the solution, making in all 1-9th of a grain of morphia and 1-180th of a grain of atropia. In a few minutes, the thumb and fingers, from being clenched into the palm, became well extended, but soon fell into a natural position and remained so. The opisthotonos was not entirely relieved. Cold applications were kept to the head, which was hot, but not excessively so. Pulse pretty weak. Injected, per rectum, three drachms of brandy in warm water, and directed this to be repeated every two hours until the pulse improved. No attempt to arouse the child to consciousness was allowed, as it was important to avoid all sources of irritation.

November 29th.—Child able to be up about the floor, but feeble. Soon after my departure, and about three hours after I first saw her, she called "papa!" but did not open her eyes. An hour later, she became conscious, and has remained in a natural condition since, and able to eat, though vomiting now and then. The medicine operated three times. The opisthotonos continued for about an hour after my departure.

November 30th.—Has undoubted malarial fever. ℞—Quin. sulph., gr. iij., q. 4 h. From this time she gradually regained her normal condition.

In part first, I gave the particulars of a remarkable case of convulsions caused by abdominal irritation, extracted from a letter from the parent, and published in the "Boston Medical and Surgical Journal." The case has since been published in full in the "London Medical Times and Gazette," November 21st, by Sir John Rose Cormack, with "Remarks on the Treatment of Infantile Convulsions of Reflex Origin." He says, in con-

clusion, "the quantity of morphia which can be safely injected into the cellular tissue of children, I am unable to state, either from my own experience or from inquiries addressed by me to several friends in large practice. The subject requires the careful clinical study of several competent observers." "If the hypodermic method of employing morphia can be formulated for safe use in the treatment of convulsions of children, it is obviously preferable on account of its much greater certainty and rapidity of effect."

This is only the third case in which I have used anodynes hypodermically in young children; once in a hopeless case of tubercular meningitis; once in poisoning by stramonium, with prompt relief. But, as the dose can just as well be graduated to the child's age, using a fraction of a drop, if necessary, and as the danger of "cumulative" action is not so great in this method as in the enemata per rectum, when large doses are required, I shall hereafter resort to the former in preference to the latter method.

Sir John, in remarking on the many important points of his case, says: "The great clinical interest of this case in respect of treatment belongs to the large amount of hydrochlorate of morphia which was hypodermically injected, and the signal success which attended the practice. The fifth of a British grain is a large amount of the salt to be injected into the cellular tissue of a boy of seven years of age. For this reason I have been careful to describe with minuteness the exact condition of the patient before, at, and after the injection. The result of the experiment made in this case militates against the opinion of Dr. Charles West, of London, so far as a single case can be allowed to weigh against a conclusion arrived at by one of the most experienced and accomplished physicians of the day."

In my case, the amount of morphia in proportion to age was greater.

Cases Illustrating the Effects of Electricity in the Treatment of Disease.—There has been so much skepticism exhibited as

to the alleged extraordinary, not to say miraculous, effects of electricity, when systematically and scientifically applied, that it may not prove uninteresting or uninstructive to the general practitioner, who has probably not had the time or opportunity to satisfy himself, by direct experiment, of the correctness of these reports, to give a few clinical histories, coming as they do from one who has no claim to be called a specialist, and who has not very long ago emerged from the domain of skepticism himself.

Some of the most beneficial results of electricity were exhibited in the prompt relief of vomiting from various causes, but these cases, originally intended to form a part of the present series, were published, at the request of the editor, in the second number of the "Archives of Electrology and Neurology," just issued from the Press.

CASE VII.—This patient has presented for several years a series of most remarkable and anomalous nervous symptoms. She is thirty years of age, very intelligent, and remarkably well educated. Among other neuralgic symptoms, she has had for several years severe pains in the knees without any symptom of inflammation. Latterly, she has become feeble and anæmic in consequence of an attack of fever in the South. Besides the pains, for which I was especially called in, she had various symptoms of cerebral and spinal anæmia, for which various remedies had been prescribed in vain. She had nausea and vomiting of her meals. The Faradaic current from a Gaiffe's sulphate of mercury battery was applied every night to the knees, and also from the upper part of the spine to the epigastrium, to relieve the dyspeptic symptoms and to act as a general tonic. In conjunction with pepsin and the acid phosphate, the electricity soon relieved this trouble. The pain in the knees was promptly and almost entirely relieved temporarily, so that she could sleep with the aid of ten grains of chloral, sometimes repeated. The pain recurred each afternoon, but always in a mitigated degree; and, after eight or ten séances, disappeared altogether. The galvanic or constant cur-

rent from twenty-four cells was used twice, but the other battery was more effectual.

The three following cases illustrate the rapidly beneficial effect of electricity in paralysis of sensation and motion when applied early in the disease:

CASE VIII.—Mrs. S. D. M., a lady of delicate constitution and numerous ailments; lately called my attention to a paralysis of the right thumb, affecting the muscles and integument as far as the wrist. It had developed slowly for several months, and was now rendering her thumb comparatively useless; that is, she could not feel a small object between her thumb and finger, and could with difficulty hold her needle in sewing. One application of the Faradaic current from Gaiffe's little apparatus relieved her very much, and two more to such an extent that she thinks further treatment unnecessary.

CASE IX.—James C., aged forty-eight, applied to Dr. Murdock September 13, 1874. Had had a severe attack of intermittent fever, and awoke one morning with complete paralysis of sensation affecting only the distal half of the thumb, index, and middle fingers of the right hand. Had not had anything to do with lead. Dr. M. applied the galvanic current from twenty-four cells with no effect. On the 14th, I tried Gaiffe's battery, but, with its full power and the wire brush, could produce no sensation in the affected parts. With a Kidder battery and the brush, produced a slight effect, but none with wet electrodes. To-night, 15th, he is better; very *slight* sensation. Applied Gaiffe's battery with brush, but he could only bear the full strength in the palps of the fingers; that is, where the paralysis had been most intense. After a twenty minutes' séance, substituted the wet electrodes, which produced soon a decided effect; and after a séance of three-quarters of an hour, he was very much better, the sensation being almost normal up to the first phalanx. A very slight numbness remained for some days, but yielded to three more short applications.

CASE X.—P. M., aged forty, a stout and remarkably healthy plumber, awakened a week ago and found rather more than the

distal half of the index, middle, and ring fingers of the right hand were numb. He got up and rubbed them with kerosene, but they got no better. They remain in precisely the same condition now. There is also slight paralysis of motion, which effects the muscles of the forearm to some extent. Use of the hammer tires the hand very soon. He is undoubtedly poisoned with lead, from his own account. No line on the gums.

January 9th.—Tried galvanic current with interruptions, twenty-four cells. No impression without the interruptions. Séance half an hour.

January 10th.—Patient states that the hand seems stronger; that the fingers feel more natural. Applied the galvanic or constant current with slow interruptions, twenty-four cells, half an hour. Muscles respond much more readily to the current. Afterwards applied the Faradaic current, which now, as it had not done before, acted well on the muscles.

January 11th.—Repeat Faradization.

January 15th.—Application yesterday and to-day. Paralysis has almost entirely disappeared, although he has worked hard.

January 17th.—Has now the full strength of his hand, and only feels a slight numbness in the palp of the index finger.

January 19th.—Almost well; apply battery.

January 21st.—All right.

The following cases illustrate the effect of the galvanic, or as it is sometimes, not very accurately, called the constant current:

CASE XI.—*Obstinate Insomnia—Failure of all Ordinary Remedies—Prompt Relief by Galvanism.*—Mrs. E. P., aged thirty-five, feeble, nervous, neuralgic, and obstinately sleepless, with occasional hysterical attacks; has also a painful, probably neurotic trouble in one knee-joint, for which various treatment has been tried. All the various anodyne mixtures have caused nausea or hysteria. A teaspoonful of Hoffman's anodyne caused a violent hysterical attack the moment it was swallowed. The only sleep she gets is when she takes a large draught of brandy at bedtime.

December 28, 1873.—Applied the galvanic current this evening to the knee-joint for the pain, and from the nape of the neck to epigastrium, wet electrodes for the insomnia, having repeatedly noticed the marked drowsiness induced when applying the current for other purposes, and also from the Faradaic current. A metallic taste and a sense of choking was produced by six or eight cells of a Stoëhrer's battery.

December 29th.—Did not sleep any better; but feels decidedly stronger; knee not so well. Applied the galvanic current to knee, also to neck, back and front, and to vertex, keeping one electrode always on the epigastrium.

December 30th.—Applied again, with an application of Faradization to knee. The brandy has been discontinued for two nights. She slept better last night, and expresses herself as much better in every way since the applications.

December 31st.—Slept soundly all night, and after having been aroused at 7 A. M., went into a sound sleep again; the knee trouble rather increases.

January 10, 1874.—Has slept soundly and refreshingly every night without a resort to any stimulant. Has improved remarkably in strength; much less nervous.

January 12th.—Was obliged to apply an immovable apparatus to the affected limb, notwithstanding the inconvenience of which, the patient's sleep was undisturbed.

CASE XII.—This was a case of obstinate epilepsy, and is only alluded to on account of the influence of the galvanic current on his sleeplessness. It was applied every evening, and invariably produced a quiet sleep, whereas his wife was constantly disturbed by his restlessness previously. It also had the singular effect of causing an evacuation of the bowels within half an hour in addition to his usual morning action.

CASE XIII.—In this case the galvanic current, applied for the relief of uterine pains, produced marked drowsiness. On one occasion, the first, to such an extent as to alarm her husband seriously. He aroused her with difficulty and gave

brandy. She had never exhibited any nervous or hysterical symptoms.

CASE XIV.—This is my own case. I had suffered for several winters with chilblains affecting the toes of one foot; and last winter they assumed the usual purplish-red appearance, with the accompanying horrible sensations. I applied the galvanic current for ten minutes, and had no trouble the remainder of the winter. Some very successful cases of this kind are related in an Italian journal ("Gaz. Med. Ital. Prov. Venete") by Dr. Santopadre. He used Faradaic electricity. The chilblains are, of course, due to vaso-motor paralysis, and it is not strange that electricity should be the proper means of relief, since the effect of the galvanic current is to contract the minute vessels.

CASE XV.—Miss G., aged eighteen, the subject of leucorrhœa and severe dysmenorrhœa, had been on tonics and other treatment with considerable relief to all her symptoms, except the dysmenorrhœa, and an almost constant backache of a severe character. Applied the galvanic current, from eight to ten cells, the most she could bear, to the lower spine, on alternate days. Five applications. After the third, was relieved of all pain. Has continued free from pain ever since. Her dysmenorrhœa is also much better.

CASE XVI.—M. A. B., a girl twenty-six years of age, the subject of repeated attacks of malarial fever, was seized January 19, 1874, with a severe pain extending from the right temple across the ramus of the jaw to anterior edge of sterno-mastoid. Applied the galvanic current to seat of pain for seven minutes, when she declared that the pain was all gone.

January 20th.—Said the pain recurred at the end of four hours for a short time, and that she had felt none since.

CASE XVII.—V. McC., a delicate young girl, always complaining of dyspeptic and anæmic symptoms, and much reduced from inability to eat proper food, applied to me for a swelling in the left arm-pit, which had been there for over two years, and had given her pain for several months, and latterly

to such an extent that she can not sleep, and can not even bear to let the arm press against it, whether lying or sitting. The pain has gradually extended down the arm and forearm to the hand, and there is a hard swelling along the radius almost like a periostitis. Sometimes the pain extends to the pectoral muscle and above the clavicle. It is hard, and has the feel of an indurated and hypertrophied axillary gland, but is more irregular, as if two or three were welded together. Handling is quite painful.

Commenced to-day, January 22, 1874, the application of the galvanic current, one electrode on the tumor, the other moving from the adjacent mamma to a little above it; also from the sixth cervical vertebra to arm and forearm for a few minutes. The pain in both localities entirely relieved in thirty minutes.

January 25th.—No shooting pains in tumor, and no recurrence of arm pain; tumor still painful; repeat.

January 27th.—No pain anywhere, and very little soreness in the tumor. No trouble in sleeping in any position.

January 29th.—Free from pain or soreness; the tumor seems softer. She thinks it is decidedly smaller. Is laboring under a malarial affection.

February 4th.—The electricity has been regularly continued.

February 18th.—Until the 12th, felt no pain, and she thought that the tumor was diminishing; but she was then called upon to use the arm a good deal and for some days, and the pain has recurred, and is now as bad as ever, being of a stabbing character. Applied galvanism as before; pains all relieved in fifteen minutes.

February 20th.—Pain much relieved, but can not lie on the affected side. Applied galvanism.

February 26th.—Made application to-day, the second since last date. Can now lie on the affected side and has no pain.

March 1st.—Says she is all right.

March 8th.—Felt entirely relieved until the 5th, when, on making some unusual motion with the arm of the affected side, felt a sudden pain in the axilla, and the old pain in the tumor, in the arm, forearm, and hand returned. A séance of twenty

minutes relieved all pain, and she could not induce it by any motion of the arm. She has continued well, avoiding the causes which have produced the relapses.

CASE XVIII.—*Various Affections Relieved by the Faradaic Current.*—This was a woman suffering from intense "bilious colic," her suffering being so great as to prevent her lying down, or taking any but very short inspirations; had also intense headache and constant vomiting. One electrode was applied to the lower dorsal region of spine, the other to the epigastrium. Almost immediately after the full strength of a Kidder's electro-magnetic battery was applied, she could breathe easier. In eight minutes all abdominal pain was relieved. One pole was now shifted over the seventh cervical vertebra, and within ten minutes the headache and vomiting were entirely relieved.

CASE XIX.—*Herpes Zoster.*—This man met me in the street, May 29, 1874, complaining of a very severe pain over a spot the size of the palm, on the right side of the thorax. Over this spot is observed a roughness, and a slight redness. Diagnosed herpes and predicted vesiculation. The pain had commenced four days ago.

May 30th.—Can not endure the pain, and came to the office for relief. It is now a perfectly typical case; a perfect girdle of vesicular eruption two inches broad, extending from the median line in front precisely to the median line behind. The pain has not allowed him to sleep. Applied the galvanic current for eight minutes from the posterior end of the girdle to the painful spot on the side. Within four minutes the pain had disappeared; 12 to 18 cells. Patient was wonderfully pleased and astonished.

Evening.—Pain has returned. Dr. Murdock applied the battery, and relieved the pain in five minutes.

June 4th.—No pain for five days. It recurred last night, and is now worse than ever, in the same spot. Dr. M. applied the current for fourteen minutes. At the end of eight minutes, the pain was almost entirely relieved, and completely so at the termination of the séance. Has had no effect on the

eruption. I am now successfully applying it to another case. Both forms of electricty seem to relieve, but the galvanic is preferable. One electrode should be placed below and one put above the portion of the spine adjacent to the disease, as well as the painful points.

CASE XX.—M. H., a single lady, of uncertain age, of a very delicate and nervous organization, attacked suddenly last Spring with a burning sensation in the right foot, and the appearance of a circular, erythematous patch, the size of a half-dollar, on the instep. This was more painful than the rest of the foot. The discoloration disappeared at the end of three or four weeks, but the symptoms have rather increased; and there is a portion of integument on the inner side of instep, which is "numb." The pain has extended to the sole of the foot and a little up the leg, sometimes darting to the hip. She walks with difficulty, and can scarcely sleep at all, and sometimes not without sticking the foot out to avoid the pressure of the bed-clothes. Applied the interrupted current from a Gaiffe battery for twenty minutes. The painful symptoms were markedly relieved; the numbness much less so.

December 1, 1874, (*Third Day After.*)—Much less pain and numbness. Has slept the last two nights without difficulty; feels stronger also; repeat application.

December 19*th.*—No further treatment; was entirely free from pain until the past week; has walked more than usual; the pain is trifling, however. Applied the current again, with complete relief. The paralysis of sensation is not much better apparently.

Cases of Various Forms of Myalgia.—It is well known to most practitioners who make a frequent use of electricity, and to some who do not, that it is a specific against certain painful affections, commonly called muscular rheumatism, but which has received various designations from different authors; some of the latest writers still attributing it to neuralgia. But Anstie, in his "Neuralgia and the Diseases which Resemble it," clearly shows, I think, that it is not neuralgia, since it never follows

the course of any particular nerve. It has no affiliation to rheumatism whatever in its manifestations, its causes, or its effects. Since we do not understand its pathology, we may as well adopt Dr. Inman's term myalgia, as it signifies merely pain in the muscle, or rather in the tendinous and aponeurotic attachments of the muscle. Sometimes you may cover the painful spot, as a single attachment of one muscle, with the tip of the finger, sometimes with a half-dollar, and this, not seldom, leads to a wrong diagnosis with those who look for muscular pain. Spinal irritation, attributed by different authors to many different causes, is attributed by Inman to myalgia affecting the attachments of the erector spinæ muscles to the spinous processes; also the "backache" characteristic of the female sex of the present age, or the wearing pain, and dragging weakness over the upper part of the sacrum, is attributed by him to a strain on a weakened muscle in maintaining the erect posture, and consequent myalgia. This pain is often, no doubt, partially, and sometimes wholly due to this cause, though not generally; irritation of the sacral plexus from uterine disease being the important factor. The so-called "growing pains" of children are doubtless cases of myalgia, their weak muscles being over worked during the day by the undue amount of exercise to which they are subjected. Myalgia, in fact, is apt to be induced in all cases of overwork of a muscle in a normal condition, or when any work is exacted of a muscle imperfectly nourished, or sometimes when it is called upon to act at a disadvantage, as when one in perfect health stoops, and rises with severe lumbago, which may last for hours or days; the same thing happens to the muscles of the neck sometimes.

Two principal reasons impel me to ask your particular attention to the following cases of this disease. One is, that although every physician meets with and treats myalgia, under one name or another, as no uncommon affection, very few recognize the obscurer forms, which are constantly occurring under various circumstances, but often, as pointed out in Inman's excellent work, during the convalescence from tedious

or wasting disease, thus often causing unnecessary alarm, as well as inflicting no small amount of unnecessary suffering; it being almost always susceptible of prompt and permanent relief under appropriate treatment. Another reason is, that even the latest authors who describe the disease, scarcely allude to electricity as a remedy—not even Anstie. This is very remarkable, since the prompt, almost magical relief which induced electricity affords in the most violent cases is pretty generally known, and, to some extent, even among non-professional persons. In my own neighborhood there has been, during the past two years, an unusual prevalence of it, a sort of epidemic, and some of its most singular phases have fallen under my treatment. Many of these would scarcely have been recognized had they occurred singly. In Inman's work, almost every variety is described except one, of which I shall present three instances. This unusual prevalence was probably connected with the prevalence of malarious fever. It is of the greatest importance that we should be on the qui vive for this affection, both because it is so common and because its diagnosis will save our patients so much distress, and obtain for us so much éclat, since its relief is so easy of attainment, and perhaps after all sorts of remedies have been tried in vain. Since the remarkable results of the galvanic or constant current in the relief of pain, and in the cure of a great variety of diseases, have become known through Remak and his followers, Duchenne's important labors have somewhat been thrown into the shade, and the Profession have been disposed to place less reliance on the induced or interrupted or Faradaic current. A reviewer of Althau's in a late number of the "London Medical Times and Gazette" thus speaks of it: "Though Faradization is not without its uses, these seem in the meantime to be—perhaps from the reäction of opinion— somewhat under eclipse, but if any one wishes to read a glorification of this mode of applying electricity to the cure of disease, let him peruse Duchenne's great work; which might almost be described as a work for the laudation of interrupted electricity."

These are the terms in which we constantly hear and see electrical treatment referred to by high authorities, in other matters, but by men who have had little personal experience evidently in the startling and seemingly incredible results of both forms of electricity. For the relief of myalgia, however, especially as it affects the more superficial muscles, any, in fact, but the deepest seated muscles, I have found faradization, locally applied, more prompt and effectual than galvanization. Meyer recommends that we should use the metallic electrodes here, and even the metallic brush, or electric moxa. Following him, I did so in my first essays, but it is painful, especially the brush, and I do not think any more effectual than the wet electrodes, which are rather pleasant when properly graduated. G. Vivian Poore, the latest writer on the subject, in his lectures published in the "London Lancet" for 1874, recommends, in certain cases, that, while the electrodes are applied, the affected muscles should be kept in action. When the affection is chronic, and when a certain amount of rigidity exists, this may be worthy of trial, when some improvement does not follow the first or second trial. When the affection seems to be undoubtedly muscular, and the wet electrodes fail, which will be very rare, it is well to try the metallic disk or brush, and, when faradization fails, to try the galvanic current from a large number of cells. The latter will, now and then, give permanent relief, when the relief from the former is only temporary. Besides, the failure of the interrupted current is a strong argument against the existence of myalgia, and the pain, being more deeply seated, or congestive, the galvanic is the proper current, as it passes more deeply into the tissues and organs of the body than the Faradaic.

CASE XXI.—G. M., aged fifty-five. I introduce this case first, because it illustrates what has just been said about the two forms of electricity in myalgia, and some of the minor difficulty in diagnosis. I was called to him about a week ago; he had then been ailing and confined to his room for some days with slight fever; malaise; cough; but principally pain in

right side of thorax, shooting up to shoulder; almost complete inability to help himself in any way, and to draw a full breath; symptoms clearly resembling those of pleuritis; physical examination failed to detect any thoracic disease; and the pulse was not accelerated; the temperature 102°. When muscular rheumatism accompanies the development of thoracic disease, as it not unfrequently does, and the inspirations are thereby rendered so shallow as to make it difficult to catch abnormal sounds on auscultation, it is easy to make a wrong diagnosis and to give a too favorable prognosis. The battery usually settles the matter at once by removing promptly the muscular complication. I gave a hypodermic injection of morphia, having no battery at hand, and a solution of morphia to be taken *pro re nata*. The following day he was no better, and I applied the interrupted current from Gaiffe's battery. The pain had, however, shifted somewhat, and had settled fiercely in the shoulder. The pain in the side was very much relieved, so that he could get up and down, and walk about with but little difficulty. The pain in the shoulder was not so much affected. I also ordered a full dose of quinine, twenty-two grains. The next day, although the temperature was much lower, the pain was as bad as ever, and I requested Dr. J. C. Young to apply the galvanic current, which he did from twenty-four cells, and with almost complete relief. This has continued permanent.

CASE XXII.—This case occurred yesterday, December 21. The patient is a lawyer, young, and enjoying excellent health, except a little dyspepsia and nervousness now and then from sedentary habits. Attacked rather suddenly in the morning with severe pains in upper part of back, shoulders, across chest, and down the arms; a feeling of oppressive weight at epigastrium; dull heavy feeling in head; pains shooting occasionally across temples, and nausea now and then, with considerable alarm. He could not move without great pain. Pulse normal, temperature 102°. Feeling of great chilliness although roasting before a hot fire. The pain was so general that he could not locate it in any particular muscle. I applied one of the

wet electrodes of a Faradaic battery of the Galvano-Faradaic Company's make to the seventh cervical vertrebra and below it, the other in succession to points from this spot to middle of right arm. In three minutes, by watch, the patient was surprised to find the suffering wonderfully better, for he had not attached much faith to this mode of treatment. The second electrode was then moved across the pectoral muscle, and to left shoulder and arm, and in eight minutes he was free from all pain on motion, except the head; a very mild current was then passed over the scalp and temples, and the head symptoms were almost entirely relieved. He was ordered twelve grains of quinine and ten minims of elixir McMunn. One hour and a half after, during which time he slept, the same symptoms recurred, if possible, worse than ever, for the pain was so severe as to induce vomiting. I now considered that the affection was probably confined to the trapezius muscle, and that the recurrence was due to the fact that the current was applied to only a small portion of the muscle. I accordingly commenced at its occipital attachment, passed down the spine to its lowest limit, then over the scapulæ (then touching the middle of this region, on either side, nausea was induced), then over the clavicle, deltoid, biceps, etc. The relief was as prompt as before. The superficial pain of the head was also relieved by application to the occipito-frontalis. The séance in both cases lasted half an hour. To-day, find patient entirely free from pain, temperature 100½°; says, in the night, when changing his position, he felt a slight twinge here and there.

December 24th.—Although his temperature keeps rather high (102°), has had no pain.

This muscle is very prone to myalgia, and frequently the pain is confined to only small portions, and owing to its cranial attachment, causes headache, which spreads from this muscle over the occipito-frontalis, and thus is apt to lead one astray. When one attachment of the muscle, or of any muscle, is affected, it is, therefore, better to pass the current through every portion of it. The general malaise, cerebral and gastric

symptoms accompanying these affections, and especially the myalgia of the trapezius, appear to be due to something more than the effect of severe pain, and is possibly attributable, in the case of this muscle, to the fact that the spinal accessory nerve is freely distributed to it, and also freely communicates with the pneumogastric nerve, though generally considered only motor in its influence.

CASE XXIII.—*Cases of Myalgia Affecting a Very Limited Locality.*—Mr. B., a young mechanic, in excellent health, came to my office January 11, 1874, much alarmed on account of a most intense pain in the head, which, from its character, he supposed to indicate cerebral disease, and from its sudden and unprovoked attack. He said he arose as well as ever, and on going to the breakfast table, was attacked first with a pain at a small spot in the centre of his spine, which was quickly transferred to an equally small spot at the back of the occiput; but, as the pain increased, it gradually spread over the top of the head. I immediately recognized it as myalgia commencing in the lowest attachment of the trapezius, and passing to the highest, thence spreading over the occipito-frontalis. On questioning him as to what he did after dressing, he said, nothing, except to use his dumb-bells, as he did daily. Here was a clue then to the trouble. I predicted that he would be relieved in a few minutes. Applied the Faradaic current from a Kidder battery, wet electrode to the head, metallic disk to the back of neck. In two minutes and a half, by the watch, the pain was all gone, and there was no recurrence.

CASE XXIV.—Mr. M., a stout, healthy farmer, addicted to no bad habits except occasional attacks of intermittent fever, came into the office July 24, 1874, complaining of what he called colic. The pain, which is confined to a spot not larger than the hand, just below the epigastrium, commenced suddenly this morning, and has continued all day. It is not severe enough for colic, and on bending his body in different directions, it is rather increased. Faradization for ten minutes

completely and permanently relieved him, and settled the diagnosis.

CASE XXV.—A young and healthy man came in September 8, 1874, with a pain in left side of thorax, incapacitating him for work, for walking in the erect position, or even standing erect. Has existed for several days. Applied the induced current for about fifteen minutes with the wire-brush; complete relief and no recurrence.

CASE XXVI.—John F., a stout, muscular man, came in September 10, 1874, with a most severe pain over a spot not larger than a two-cent piece, just below the lower border of the left pectoralis major muscle, preventing work. Faradization with the wire-brush for fifteen minutes. Patient much astonished on being made to go through with various gymnastics with his affected arm, to find himself without pain or inconvenience.

December 13th—Three Months After.—Has been perfectly well since application until three days ago, when he was attacked in precisely the same manner. In ten minutes the same treatment drove the pain to a spot a little higher, and five minutes longer relieved him entirely. This shifting of the pain, under the influence of the current, is not uncommon, sometimes it has to be driven from point to point until it is finally vanquished.

CASE XXVII.—*Cases of Myalgia of the Tongue and its Muscles, Affecting Speech and Deglutition.*—J. A., a stout man, in excellent health, except a slight malarial attack now and then, came into the office April 6, 1874, articulating with great difficulty, but able to give the following account of himself: That while eating his breakfast, with a good appetite, he felt a difficulty in moving the morsel, which he had chewed, back into the fauces, his tongue refusing to perform this duty, and also became affected with a sharp pain "at its root." There was nothing abnormal in the appearance of the member, and no pain on pressure, except on pressing deeply on either side of the os hyoides, principally on the right side. By exclusion I diagnosed myalgia, and requested Dr. Murdock to apply the galvanic current to these two points. In a few minutes he

expressed himself as relieved. But, a few hours later, a message was sent to say that he was much worse. Dr. M. saw him. All the muscles attached to the hyoid bone seemed now to be more or less affected. The whole tongue was very painful on pressure to the very tip; he shrank some from the approach of the finger to it; it is also decidedly swollen. Soon after leaving the office, he had a regular chill, with nausea and vomiting, followed by fever. Dr. M. applied an electrode of the galvanic (primary or constant current) battery over the sub-occipital region, and making an electrode of a silver spoon wrapped in wet cloth, he attached this and applied it as far back on the base of the tongue as possible; then from either side of the os hyoides to the tongue, for thirty minutes. The pain was almost entirely relieved. He also injected six grains of quinine hypodermically in the arm. It should have been mentioned that one of his greatest annoyances was a great accumulation of mucus in his throat, and the difficulty in getting it up or down.

April 7th.—Pain not so severe, and confined to the left side of the tongue; can swallow very little food though very hungry. Electricity applied in the same manner with almost complete relief.

April 8th.—To-day slight soreness on pressure on the left side of the tongue towards the base, and on pressure, and also in swallowing, over the hyoid bone on left side. But he swallows soft nourishment pretty well, and feels almost well.

April 9th.—Scarcely any traces of his trouble. No recurrence.

CASE XXVIII.—Mr. C., farmer, a delicate and over-worked man, who has suffered more or less from malaria for a year, though travelling about the country a good deal, sent for me August 30, 1874, in a great hurry, with the message that he was choking to death. Last night was attacked with what he calls a cramp in the right thigh, which subsided, but causes a halt in his gait to-day. Was eating his dinner, or had but just commenced, with a good appetite, when he suddenly found that his tongue refused to assist him in deglutition. Then pain of a

severe character attacked the base of the tongue, and soon extended to the parts below the base of the lower jaw, all around from angle to angle; he soon lost all power of articulating distinctly, and could swallow nothing, and thought he would choke with the mucous accumulation. He was in this condition when I saw him; his tongue felt to him as if greatly swollen, but it was not at all so. The tongue and fauces appeared perfectly healthy; rather pale; pressure towards the base of the tongue very painful. Externally the principal pain on pressure was over the posterior portion of the os hyoides, on the right side; just behind the *symphysis monti* it was again severe; that is, at the attachment of the genio glossus and genio hyoglossus; head hot; extremities cold; patient feels very chilly, although the day is warm; pulse 100, small and feeble; temperature 102°; drowsy. His suffering, mental and physical, was so great that I gave him, at once, a hypodermic injection of morphia, one-third of a grain. Finding that, after an interval of twenty minutes, he got no relief, I commenced the application of the induced (Faradaic) current, pressing the wet electrodes as firmly as he could bear over the painful parts on either side externally, and then from the nape to these parts. In ten minutes he could articulate with considerable distinctness, and in twenty minutes he was considerably relieved of pain, and could swallow with pain and by a great effort. Believing that the deeper parts could only be effectually reached by the galvanic current, I left with the promise to return the following day and apply it.

August 31*st*.—The relief lasted only a few hours, and he is to-day suffering from the same symptoms, if possible, in a more aggravated degree. Pulse 99, small and feeble; tongue now decidedly swollen, soft and pale; the tenderness has now extended to the lips; the mucus troubles him very much; he is very drowsy; temperature 102°; can not articulate a word, and can swallow nothing. Complains of pain behind the left trochanter increased by pressure over the sciatic nerve; also of some pain about the muscles of the left shoulder. Applied the wet electrode of a zinc carbon battery to the affected parts

externally for ten minutes with considerable relief as far as articulation was concerned, and with some relief to pain. Applied then one electrode to the nape, and a suitable one to the base of the tongue, or as far back in the mouth as possible; used seven to nine cells only. Application twenty minutes to the tongue. Could articulate better, but could swallow very little better. It was accordingly reäpplied to the external parts, increasing the number of cells to eighteen, and then to twenty-four. Finding that the improvement, though decided, was not satisfactory, I applied the Faradaic current first to the external parts, and then to the tongue itself for ten minutes. Improvement less than from the galvanic. After the whole séance, which lasted over an hour, the patient swallowed two large cupsfull of thick gruel without much pain, and could articulate quite distinctly, notwithstanding the swollen condition of the tongue, nor was he so much annoyed by mucus. His drowsiness was remarkable, falling asleep while sitting up and while the electrode was on his tongue. Ordered beef-tea, brandy, etc., freely, and gave hypodermic injection of quinine.

September 1*st*.—Although his temperature has risen to 103°, and he is no better in other respects, his tongue and throat symptoms have entirely disappeared. They did not recur.

CASE XXIX.—W. D. G., a gentleman doing business in New York, was attacked suddenly, while walking in the lower part of the city, with deep-seated pain in the cervical spine and excessive pain in attempting to talk or to swallow; no other symptoms. He got to his place of business with some difficulty, and immediately telegraphed me to meet him at his residence in the country. Not being able to go, Dr. Murdock saw him; found him free from fever, pulse good, skin pleasant. Could rotate his head without pain, but any attempt to change his position in bed induced severe suffering. Pain seemed to be confined to the line of the spinous processes, and a little to either side. Deep pressure over the spine behind and in front produced more pain than on the sides. Attempts at deglutition caused a pain passing from the front of the neck to the

back, "as if the top of the head was being lifted off." Dr. M. could not arrive at a positive diagnosis, but thought the fibrous tissues about the vertebral column might be affected by inflammation. Gave a hypodermic injection of morphia, and a solution to be taken for pain pro re nata.

April 3d.—I saw him to-day. The pain recurred about an hour after the injection, and, though he took the anodyne through the night, it only made him "wild," and gave no relief. Talking and swallowing still more painful. My suspicions are confirmed. The pain has extended to the trapezius muscle, the deep muscles at the nape, and the left scalenus. I had no battery with me, and I therefore requested Dr. Murdock to visit him in the afternoon and apply the Faradaic current. He did so, with the effect of relieving all the symptoms except the pain on swallowing, which was mitigated; talking was not painful.

April 4th.—The pains in the external parts have returned in a mitigated degree; the scalenus is free from pain; but the pain on talking, and especially on swallowing, is very severe. Applied the Faradaic current for twenty minutes, wet electrodes to nape, metallic disk to front of neck. The muscular pains were entirely relieved and the pain in talking, but that on swallowing is no better. The pharyngeal muscles are doubtless affected. ℞—Potass. Iodid., grs. v., q. 3 h.

April 5th.—The relief obtained yesterday has been permanent; could not take much of the medicine; deglutition is so difficult that he can not take nutriment enough to sustain his strength, and he is excessively depressed. I suggested the galvanic electricity in place of the Faradaic, and Dr. M. applied it, placing an electrode on the neck, the other between the sterno-mastoid and trachea, pressing as deeply as possible. While the current was passing, he could immediately swallow without difficulty, and advantage was taken of this to get him to take a dose of quinine and some beef-tea. On removing the sponge, the pain would return, but in a milder degree. After a séance of twenty-five minutes, there was no return.

April 7th.—To-day, received the following note: "I am so

relieved of my throat trouble as to be able to eat anything, all pains have stopped, and only a soreness of the limbs remains. I shall, if all goes well, go to my business to-morrow morning." And he did so. It would seem that the Faradaic current did not extend deep enough to reach the pharyngeal muscles. It would also seem that, without the aid of electricity, these cases could not have been relieved; even the hypodermic injection of morphia failing.

CASE XXX.—P. K., a rather feeble man of fifty-five, fell across a lathe in the foundry, injuring seriously the whole of the lower ribs on the right side, fracturing at least two of them. He suffered a great deal for a week, only partially relieved by a body bandage, and afterwards by a double broad band of adhesive plaster extending quite around the chest, and drawn very tightly. It is now April 21, 1874, five weeks since the injury, and he has severe pain in breathing, but especially in coughing, sneezing, etc. The pain is now quite severe at two points on the *abdomen*, below and inside of the false ribs, and these points are very tender on pressure. Moving his right arm or turning in his chair increases the pain. Applied the galvanic current of a Stoëhrer battery, first with twelve, then with sixteen cells. Within six minutes he could draw a comfortable breath for the first time, and as the current passed, he drew breath after breath, increasing the depth of the inspirations apparently with the greatest satisfaction. In another five minutes he expressed himself as feeling "like a different man." Not even on coughing did the pain recur. On rising, however, and moving his body from side to side, he discovered some painful points, and the electrodes were applied as indicated. The pain, as is often the case, was driven, as it were, from above downwards until it had arrived nearly at the pubes, leaving one spot to attack another, until after the lapse of twenty-five minutes all pain on any motion or position of the body had disappeared. May 17th (over three weeks since last date) no return of pain sufficient to call for interference.

CASE XXXI.—Mrs. R., aged seventy-three years, a feeble old lady, who is frequently sick with what she calls dyspeptic and bilious symptoms, was attacked rather suddenly August 19, 1874, with vomiting, epigastric pain, debility, etc. Dr. Murdock, who saw her, prescribed quinine. The following day I was sent for hurriedly to see her, and found her suffering intensely, and very feeble, and very much jaundiced. She was nauseated, and had the most severe pains across the scapulæ and in the epigastrium, breathing and movement of any kind gave her great pain. I applied the wet electrodes of a Gaiffe's induction battery across the back over the seat of pain, and the relief was almost immediate; after a few minutes it was applied from the spine to the epigastrium, and very soon all her pains were relieved, and she could lie easily in any position. There was no recurrence.

Chronic Myalgia.—Myalgia is very generally an acute affection, but it frequently assumes the chronic form if not recognized and treated. There is a form which comes on very slowly, almost imperceptibly, around the joints, which I have not seen noticed, and is very apt to lead to a suspicion of disease in the joint, or of the periosteum covering the articular extremities of the bones. If it affects the knee-joint in a child, it may be mistaken for disease of the hip-joint, as there is also slight lameness from the pain. In a case now under observation, the first sensation was of soreness on pressure over the internal condyle of the right os brachii; this remained in that locality for perhaps two weeks, then very gradually spread around to the external condyle, and finally to the other parts about the joint not well cushioned by muscles. It was worse on waking in the morning, and on some days than on others. Both currents of electricity relieved the pain almost entirely (it was never severe), but the patient neglected to apply regularly, and only came again when the pain threatened to increase, and on being partially relieved, did not apply again for a week or two. It has now existed for several months, but is only a very trifling annoyance to him at present.

CASE XXXII.—*Cases of Chronic Myalgia.*—Mr. A. W., aged fifty-one, in good health except a soreness and chill, roaring sort of pain just around the lower border of the ribs and over the epigastrium. Does not feel it so much when walking about the house, or while at work (he is a house-painter) as when he sits still, especially when writing. He has had it more or less for several years, but it is latterly increasing, and seeing the benefit of the electricity in his wife's case (localized galvanization for severe and chronic uterine pains), he desired a trial. There is no other evidence than the pain of lead poison. Applied the Faradaic current April 26, 1874. At the end of fifteen minutes, most of the pain had disappeared, that over the epigastrium being the most obstinate. At the end of half an hour, he was perfectly free from all pain, and could not induce it by any movement. May 14th, eighteen days after, the pain has not recurred at all in the old localities, but the day after the application returned, to a moderate extent, at a higher point; it soon disappeared, and it has not since troubled him but in a trifling degree.

CASE XXXIII.—Mr. E., for twenty-six years a conductor on the Hudson River railroad, for several years has been annoyed by occasional pains in the sacrum, resembling the woman's backache. It has constantly increased, until it now troubles him almost all the time, especially in stooping. It extends also now around the hips, and now and then down the thighs; otherwise, he is in excellent health. He states that it is a common affection among conductors, and one may well imagine that their occupation is just the one to induce myalgia of this part. Applied the primary or galvanic current, commencing with twenty-four cells, but as the current became too strong, reduced it to eighteen. In fifteen minutes the pain was all gone; he could not bring it on by any movement.

April 26, 1874, the day after the application, very slight pain in the hips, none at all in the thighs. Applied the same current for fifteen minutes, all pain had then disappeared.

June 1st.—Has had no further trouble sufficient to require any treatment.

CASE XXXIV.—This is the wife of Case XXII. Mrs. C. F., a healthy lady of thirty-seven or eight years. For more than two years has suffered from pain and soreness on pressure, or on any motion of the head, over a space extending from the seventh cervical vertebra to the base of the skull, and affecting the muscles attached to the occiput, on either side of the spinous processes. The pain over the vertebra prominens has been such that even the pressure of her dress has always been uncomfortable. When the soreness is greatest, it passes up over the occiput above the protuberance. It is frequently so severe as to induce a nausea and faintness. She has never had any relief except from painting it with strong tincture of iodine, and now this fails her. Has also hypogastric pains, and as she has formerly been under treatment for uterine congestion, they may be exerting some influence. Applied the galvanic current April 9, 1874, twelve to sixteen cells, from the neck to the hypogastrium. A séance of twenty-five minutes relieved all pain.

April 11th.—Was relieved for twenty-four hours; the pain then returned for three hours quite severely. The pain in the vertebra prominens, the most troublesome spot, did not recur, and there is only moderate pain anywhere. Applied the same current for twenty minutes, when all soreness was relieved.

April 13th.—Very much better; no pain anywhere until this afternoon, when it recurred, to a slight extent, in the deep muscles of the nape, on either side of their insertion in the skull. Applied the current to these parts; could only bear ten to twelve cells.

April 16th.—On the day succeeding the last application, had a severe pain in the sides of the neck, but none where it has always been most troublesome; but it may be, in part, due to a severe sick headache, to which she is subject. Applied the current from twelve cells from the nape to the temples, and from one temple to the other, with great relief to the headache; then across the neck, with relief to the pain there.

April 21st.—The headache did not recur after the séance, and the other pains have almost entirely disappeared. Applied the Faradaic current for fifteen minutes, to finish up the treatment. Until this date, December 20, 1874, the pains have not recurred.

CASE XXXV.—Mr. W., a man somewhat addicted to the bottle, but not to any extent for some months, has suffered at times terribly from dyspepsia, urinary difficulty, etc. For nine years he had a dull pain in the left side of the thorax anteriorly, and for nine months a constant pain on both sides, quite sharp at times; and, after walking up hill, spreading to middle of the sternum, where it is quite painful. Is now well, he says, in other respects. Applied the Faradaic current to-day, March 26, 1874, for twenty minutes, from one side to the other, with the effect of giving him almost complete relief.

March 27th.—No pain all night; has now pain in left side and under the sternum, none on right side (that last attacked). The pain is, however, less severe; has also, he says now, had a "numbness and weakness" in the left upper extremity for a year past, only felt when he is idle, or at night. The current relieved the pain in the breast in six minutes, and in five minutes that in the sternum also, so that a forced inspiration could not induce it. Applied the current to left arm and forearm.

April 2d.—Have not happened to be in the office when the patient called since last date. Dr. Murdock applied the Faradaic current, and as the pain recurred to some extent, substituted the galvanic current, twenty to twenty-four cells, with relief.

April 4th.—The pains now trouble him but very little. He says that after the Faradaic current was applied to the upper extremity, the pain was worse there than it had ever been; but it is now better. Applied the galvanic current, twenty-four cells, to painful parts and to the arm.

April 5th.—No pain; arm better. Repeat application.

April 7th.—Arm much better. Repeat.

April 18th.—On the 14th, came in complaining of a slight

pain below the original seat; arm was better. Dr. M. applied the battery. To-night, has still some of this pain remaining; arm still steadily improving. Applied galvanization with complete relief, and from this date he required no further treatment.

The two following cases, occurring in the persons of mother and daughter, illustrate the superiority of the galvanic over the Faradaic current:

CASE XXXVI.—Miss L. DeR.; patient has been very ill for several months with thoracic disease, and is much reduced in strength and greatly emaciated, was improving very much, and being over ambitious in walking, two weeks ago, was attacked with pains around the knee-joints, and with severe pains, on slight pressure, over several of the spinous processes of the upper dorsal vertebræ. It is impossible for her to lean back in a chair, and her mother endeavored to contrive a sort of saddle-pillow or cushion, so as to relieve the spinous processes of pressure, and thus enable her to relieve herself by leaning back when sitting. When sitting, it was with considerable difficulty and pain that she arose, and her gait was that of an extremely old woman. The trouble was evidently myalgia, induced by ordinary exercise in muscles not sufficiently nourished. Finding liniments, frictions, etc., unavailing, and the trouble increasing, notwithstanding several days of complete rest, to-day, August 1, 1874, I applied the Faradaic current for over half an hour, with no appreciable effect.

August 2d.—Applied the galvanic current, with no immediate effect.

August 3d.—Thinks she is a little better, and sends for me to try again. Repeat application to spine and knees.

August 4th.—Decidedly better. Repeat.

August 5th.—Pains have almost entirely disappeared. Repeat.

August 12th.—No return of soreness, and she walks as much as she feels inclined.

CASE XXXVII.—Mrs. DeR.; patient is not in good health, and over exerted herself yesterday, August 12th, in the city

while shopping. Was attacked suddenly to-day with what she calls lumbago; but the pain is confined to the tendinous expansions of the erector spinæ muscle between the sacro-iliac joints. She can scarcely get about, and only with great pain; wishes to set out for Saratoga with her invalid daughter to-morrow, and is anxious for speedy relief. Applied the Faradaic current, but with only moderate relief. Being engaged in the afternoon, I desired Dr. J. C. Young, then of Bellevue Hospital, to apply the galvanic current for me, which he did, with complete relief. She set out on her journey, and had no further trouble.

This paper has become so extended, that I am compelled to omit some very striking cases of rapid relief following the use of the induced or interrupted current. When the diagnosis is correct, failure to obtain complete and permanent, sometimes almost instantaneous relief, is rare, which is the more important, as, in these very cases, the action of all other remedies, even of the hypodermic injection of anodynes, is very uncertain, very slow, and not so likely to be permanent.

Allusion has been made as to the probable connection of the unusual prevalence of myalgia with that of malaria. But this connection is of sufficient importance to merit more than a passing allusion. Malarious myalgia does not differ in its symptomatology from its other forms. The immediate effect of electricity is the same, but the pain is more prone to recur again and again, though often in a mitigated degree; sometimes, however, in an aggravated form. When malarious fever is prevailing, this recurrence should at once attract attention, and quinine should be administered in a full dose night or morning, when the pain will usually disappear until the malarious element again gathers strength; but quinine alone will not cure the myalgia. Whether it is possible to trace any malarious complication or not, if the pain is clearly myalgic, and neither form of electricity will afford permanent relief, full doses of quinine should be exhibited.

ART. II—ABSCESS BENEATH THE DURA MATA RELIEVED BY TREPHINING—RECOVERY. By HENRY D. NOYES, M. D., New York City.

The following case is presented for publication, because it serves to increase the number of successful attempts to cope with a disease so formidable that we need all possible encouragement in the struggle to overcome it. My connection with the case was in a great degree accidental, but as the chief responsibility fell on me at the most critical period, and as the other medical gentlemen who were concerned in it have not seen fit to report it, I delay no longer to make known the facts. I make no pretence to quote authorities or advance opinions, but offer this simple contribution to the annals of general surgery.

In October, 1867, I was desired to see John D—y, aged twenty-two, living in Williamsburg; suffering from a serious affection of the head. This young man had been an inmate of the New York Hospital in 1857, when I was one of the resident surgeons. He was brought there on account of a compound fracture of the skull, produced by being thrown from a street car. The os occipitis was fractured and depressed, and the os frontis was also fractured. There were signs of compression of the brain, and some of the depressed bone at the back of the skull was lifted into place by Dr. Markoe. It was not deemed needful to interfere with the injuries about the forehead. The patient, after some months, recovered and went home.

I did not see him again until August, 1867, when he came to my office to tell me of the severe headache to which, at times, he was liable. He showed me a pouting orifice in the skin just below the inner end of the right eyebrow, by the side of the root of the nose. This sometimes gave exit to matter, and sometimes was closed. When stopped, he was liable to the violent headache of which he complained. He admitted that his life had been very irregular, and that a "spree" was not infrequent. I cautioned him against the danger to which such conduct exposed him, in view of the fact that there was proba-

bly some disease of the bone not far from the fistula, but did not probe or specially examine the part.

It was three months afterwards that I was summoned to see him, and found that grave cerebral symptoms had set in; there had been an intermitting escape of pus from the fistula, which was close to the pulley of the superior oblique muscle, or it would flow from the nostril, but the opening was now shut.

On the 10th of October, he was seized with convulsions, had twenty or more during twenty-four hours; pulse 70; foul tongue; intelligence dull, but usually his mind was quick; severe and fixed pain in forehead. When I saw him on the 14th, his pulse was 84; hands and head very hot; had pain over the right frontal region; was in a stupid mental state, but could dimly recognize persons; paralysis of motion of the left side, face, arm and leg; and partial paralysis of sensation; no strabismus; proper command of eyelids; pupils equal and natural. Examined the fundus oculi by the ophthalmoscope, but could see no signs of stasis in the vessels of the papilla. The paralysis occurred the same day, and the mental condition had been growing steadily worse, although complete coma had not yet arrived.

By combining the previous history of the patient with his present condition, I arrived at the diagnosis that there was an abscess in some part of the anterior region of the brain. Drs. Palmer and Nichols, who had been in attendance, concurred in this opinion, and in the necessity of finding vent for the matter as speedily as possible.

It was now late in the afternoon, and we felt compelled to proceed at once to the operation of trephining, in hope of finding the pus. We got the patient on the floor, two assistants holding his head and hands. I made a vertical incision from the root of the nose to the edge of the hair, and a transverse cut just above the eyebrows four inches long crossing it; then dissected up the flaps and exposed extensively the surface of the bone. It was much depressed; the periosteum quite thick; at the supra-orbital notch of the right side, there was a deep

notch, into which I could bury the tip of my forefinger. After denuding the bone, the pin of a small trephine was applied to a point three-eighths of an inch above the supra-orbital notch and to the right of the median line. When the disc of bone was removed, the dura mater felt elastic and fluctuating on the temporal side of the opening, and resistant on the side toward the median line. With the point of a bistoury, I punctured the membrane and opened a small artery, which bled smartly; attempted to stop it, but failed; and then pushed the point of the knife through the dura mater. I was delighted to see a drop of pus ooze out, and after enlarging the cut, about three drachms of creamy pus slowly flowed out. Put in my forefinger and passed it easily up to the second joint over the roof of the orbit and along a fissure at its upper and inner angle. During the dissection of the skin the patient made feeble efforts at resistance. As the blood flowed rather copiously from the dura mater, his movements became more active, and when the pus had flowed out, his intelligence brightened up in a decided degree; his utterances were more rapid, and language correct; eyeballs rolled more quickly, and the left side of the body began to recover power. He could make a firm grasp with the hand, and move the leg. The wound was syringed out with warm water. As ligatures were used, the extremities of the cuts were united by sutures; the parts about the bony opening left free; cold water dressing. When I took my leave, about an hour after the pus was evacuated, he shook hands with me, and with much animation inquired why I was going.

My next visit to the patient was four days afterwards, and I learned from Dr. Palmer that his pulse rose to 120 the night following the operation, and since has been between 70 and 80. He is now in full possession of sensibility and muscular power; is wildly and sometimes violently delirious; has pain in the forehead and natural sensation over the whole scalp; is peevish and cross; sleeps by aid of ¼ gr. codeia; has no nausea; tongue moist and furred; bowels and bladder act naturally; pulse 74. Ordered bromide of potassium, ʒss., ter in die.

The delirium continued for a few days, and then the bodily and mental functions became natural, the wound granulated well, and by November 2d, a mass of reparative material had risen up from the hole in the bone beyond the level of surrounding skin.

On the 24th of November, forty days after the operation, no more pus flowed from the cavity of the cranium; is not now irritable in temper, although always highly nervous. His memory now recalls vividly the incidents of his stay in the New York Hospital ten years ago, but can not clearly recall the events of the past few months; appetite voracious. Goes to the country to-morrow.

July 18, 1868.—From the seat of the wound made by trephine, there developed, in the space of four weeks, a fungus cerebri, which attained considerable size, projecting half an inch from the skull and expanded one and a half inches in diameter. He was seen in consultation by several prominent surgeons of the city, amongst others, Dr. Van Buren. The fungus cerebri was cut off and freely cauterized with nit. argent., but it reäppeared, and was finally removed by a species of truss or pad contrived for it by a doctor in Bridgeport, Connecticut. Under the continued pressure caused by the pad, it disappeared. I saw patient subsequently, and he suffered from no head symptoms, headache, etc., and had gained flesh. Over the wound there was a dense cicatrix of fibrous tissue permitting pulsation of the brain to be felt.

ECLECTIC DEPARTMENT.

"Carpere et colligere."

ART I.—RECENT PROGRESS IN OBSTETRICS AND GYNÆCOLOGY.

By W. L. RICHARDSON, M. D., London, England.

OBSTETRICS.

Chloroform as an Anæsthetic.—Dr. Zweifel reports* the results of some experiments which he made, with the view of ascertaining the effect on the child in utero of chloroform administered to the mother. He invariably found that chloroform was present in the urine of children whose mothers had been under the influence of chloroform during parturition, and also in the placenta. Dr. Zweifel questions whether the administration of chloroform may not be found to have a very deleterious effect on the fœtus in utero. Not unfrequently children are born asphyxiated under such circumstances. It is also very noticeable that many children suffer, soon after birth, from jaundice, when the mother has been under the influence of chloroform during her labor.

Uterine Souffle after Confinement.—M. Bailey reports† some interesting facts which he has obtained from a careful examination of seventy-eight women. A bruit was discoverable sixty-eight times. In the large majority of cases the tone was soft, liquid, and prolonged. It was always intermittent, the duration being longer than the pause. The intensity about equaled the souffle heard between the fourth and fifth months of pregnancy. The larger the uterus, the louder the sound. Three or four times it was as loud on the morrow of the confinement as at the end of pregnancy. The sound was generally heard over the sides or over the lower half of the uterus, rarely over the superior half. It predominates on the left side. The maximum time during which the bruit was heard after delivery was one hundred and thirty-eight hours; the minimum, ten

* Berliner Klinische Wochenschrift, May 25, 1874.

† Archives de Tocologie, 1874; London Medical Record, October 21, 1874.

hours; the mean, sixty-three hours. The uterine contractions, the fœtal death occurring in utero long previous to the delivery, and profuse hæmorrhages, all tend to influence the force and duration of the souffle. The first of these circumstances enfeebles the sound, and the last two increase its tone. The origin of the sound is the passage of blood from the smaller into the larger vessels or sinuses.

Uterine Thermometry.—Dr. Schlesinger reports* the following results of a long series of investigations made with a view of ascertaining if it was possible, by means of the thermometer, to diagnosticate pregnancy during the earlier months. The temperature of the uterine cavity is higher than that of the vagina. The pregnant uterus has a higher temperature than the non-pregnant.

Recognizing the fact that the temperature of the uterus, both in the pregnant and in the non-pregnant condition, is higher than that of the vagina, Shroeder considers that the death of the fœtus may be inferred in those cases in which the difference between the vaginal and uterine temperature is either very slight or imperceptible; since, when the fœtus dies, it abstracts some heat from the uterus itself, and thus equalizes the temperature of the uterus and vagina.

Induction of Premature Labor.—Dr. J. G. Swayne reports† twenty cases in which he induced premature labor; seventeen were multiparæ and three primiparæ. In one case the operation was performed three times, and in three cases twice on the same subject. Fourteen of the operations were performed anticipatory of craniotomy, owing to a deformed pelvis; three times the labor was induced owing to obstinate vomiting, and three times for albuminuria threatening convulsions. Three of the mothers died, two being *in extremis* when the operation was performed. Eleven of the infants were still-born, and two of those born alive subsequently died. In seventeen cases, labor was induced by a gradual dilatation of the os uteri by means of

* Allgemeine Zeitung, March 10, 1874.

† British Medical Journal, August 8, 1874.

carbolized sponge tents. This method of procedure Dr. Swayne recommends as more nearly resembling the natural processes than any other. The time occupied in bringing on the labor in these cases varied from six hours to sixteen days.

In cases where prompt delivery is necessary, the use of Dr. Barne's elastic bags is more sure and rapid in accomplishing the desired object. In all other cases, Dr. Swayne considers gradual dilatation a far safer method of procedure.

Professor Carl Braun opposes* the use of sponge tents as being often productive of most serious if not fatal results. Parametritis and pyæmic symptoms frequently arise from the absorption of the foul discharges which always follow their use. He advises in preference to all other plans the method, now universally adopted in Vienna, of the introduction of a pointed quill by means of a uterine sound passed through a small opening made in the side. This being introduced, the sound is withdrawn, and the membranes ruptured by the quill. The amniotic fluid drains away, and, labor pains soon beginning, the delivery is usually effected within twelve hours.

Rigor following Delivery.—Dr. Pfannkuch† offers the following explanation of the rigor which is so frequently observed to follow the birth of a child. According to experiment, the fœtal temperature has been shown to be nine-tenths of a degree higher than that of the mother. The maternal temperature, however, being unaltered, it is evident that the pregnant woman must be producing less warmth than the non-pregnant. When the fœtal source of heat is removed by the birth of the child, there is produced at once a disproportion between the amount of heat produced and that given off. The rigor is caused, therefore, by the efforts made by nature to establish an equilibrium.

The same rigors are frequently noticed when the child dies during pregnancy. In several cases in which Dr. Pfannkuch has

* Philadelphia Medical Times, January 23, 1875.

† Archiv. für Gynæcklogie, iv. 2.

recently seen, where the mother gave birth to a dead child, no rigors followed the birth; and this would serve to strengthen the theory by which this observer endeavors to explain a symptom so frequently noticed by accoucheurs.

Puerperal Fever.—In the address on obstetrics, delivered at the last meeting of the British Medical Association,* Dr. J. Matthews Duncan stated that it was his belief that nearly one in every one hundred women, delivered in Great Britain at or near the full time, died in parturition or before the puerperal state and its effects had passed away. In addition to this startling mortality, parturition brings with it a vast amount of disease and suffering which does not end fatally. By far the largest number of deaths are due to puerperal pyæmia, a term which Dr. Duncan would substitute for the erroneous one of puerperal fever, since there is nothing essentially puerperal known in it, nor anything of the nature of a fever as that term is generally understood. All evidence brings the disease into the closest alliance or identity with surgical pyæmia. It is a disease always present; but never has it been shown to possess an epidemic character. It varies in its ravages just as pneumonia does, but in a very different manner from what is found to be the case with cholera or scarlatina. The puerperal woman presents a most favorable nidus for the reception of morbific material in her contused and lacerated passages, and patients suffering from puerperal pyæmia, or any allied diseases, offer this morbific material in its most potent essence. No other well-demonstrated communicability has ever been proven, as tending to show that this disease is either contagious or infectious. The same laws of pathology govern lying-in hospitals, as govern all hospitals, and it is absurd to claim that any greater danger exists for patients in one than for those in the other. Beyond question, pyæmia is a septic disease, and puerperal pyæmia may be almost, if not altogether, prevented by the application to delivery of a practice based on antiseptic principles.

* Obstetric Journal of Great Britain, September, 1874.

In a carefully prepared treatise on Erysipelas and Puerperal Fever, recently published, the author, Dr. Thomas C. Minor, gives in detail an account of both diseases as they prevailed sporadically in the United States during the year 1870, and also the history of a puerperal fever epidemic observed in the southwestern part of Ohio in the winter of 1872. The facts, as given by Dr. Minor, appear to establish the fact that erysipelas and puerperal fever seem to prevail together throughout the United States, and that any marked increase of one disease in any particular locality is always followed by a corresponding increase of the other. Infants die of erysipelas shortly after or before their mothers die of puerperal disease.

M. Chauffard* considers that any disease which produces morbid discharges may give rise, in a woman recently confined, to puerperal fever. During his service at the Neckar Hospital, he has frequently remarked that the opening of an abscess, or the presence in the wards of purulent ophthalmia or erysipelas, is sure to be followed in a short time by puerperal troubles of greater or less severity.

Absence of the Fœtal Pulse during Extraction by the Feet.—Professor Dohen, of Marburg, reports† two cases where, during an extraction by the feet, the fœtal pulse ceased for a considerable length of time, and yet with no fatal result to the child. In both cases the pelvis was contracted, and the pulse was distinctly felt to cease beating as the after-coming head descended into the pelvis. In the first case, the cardiac pulsations were suspended for at least two minutes, and in the second case for more than three minutes. In the first case, the baby, a girl, was reänimated in a warm bath after about a quarter of an hour's effort; but in the second case the measures to resuscitate the infant, a boy, were continued for half an hour before the frequency of the inspiratory and pulse movements became normal.

* Gazette Hebdomadaire, October 16, 1874.

† Obstetrical Journal of Great Britain and Ireland, January, 1875, from Archives de Tocologie, October, 1874.

Professor Dohen considers that the arrest of the heart in these two cases was due to the compression of the brain and irritation of the pneumogastric. In cases where the arrest of the heart's beat is due to asphyxia there is but little hope of saving the child's life, but where the action of the pulse is slackened or arrested by compression of the brain, a rapid extraction of the head will usually be sufficient to save the life of the infant.

These views are strictly in accordance with the theory of Leyden,* who has shown that the compression of the brain which slackens the heart's beats may also completely arrest them, and that this action is produced by the help of the pneumogastric.

The Tensile Strength of the Fœtus.—Dr. J. Matthews Duncan reports† a series of experiments undertaken to ascertain the amount of force which can be safely applied in effecting the delivery of a child. The body of a new-born baby was passed through an aperture so cut in hard wood as to represent the brim of a contracted pelvis. Above the ankle, an apparatus was applied by which weights could be suspended. The amount of the weights used was to be gradually increased until the body of the child was dissevered. In order to bring the experiment into conditions analogous with those of labor, the weights were allowed to operate for only half a minute at a time. In each experiment the separation took place at the neck. The decapitating force varied from ninety-one to one hundred and forty-one pounds, giving, therefore, an average of about one hundred and twenty pounds.

The life of the child is, of course, compromised before the limit of the tensile strength of the fœtus is reached, since the destruction of the spinal column occurs under the application of a force considerably less than is required to produce decapitation.

In these experiments it was found that the cervical part of

* Virchow's Archiv, xxxvi, 4. † Brit. Med. Jour. Dec. 19, 1874.

the vertebral column first gave way, allowing the dissevered vertebræ to become widely separated before actual decapitation took place. While one hundred and five pounds sufficed to separate the cervical vertebræ, an addition of fifteen pounds was required to decapitate. In all cases the vertebral column yields with a jerk, followed by a marked elongation of the fœtal body. This fact is therefore one of great importance to the accoucheur if he wishes to avoid decapitation. It was further found that a single limb, so far as strength was concerned, sufficed to effect decapitation by traction.

These experiments are of great value as regards the force that may safely be employed in podalic extraction; but it was found a far more difficult problem to ascertain the power that may safely be applied in extracting a child with the forceps. In this latter case, a far greater force can be exerted than in the former. It has been proven that it is possible to apply the forceps to a fœtal head at the brim of an actual pelvis so as to defy the utmost efforts of the most powerful accoucheur. The fœtal head is firm enough to resist a dragging force far greater than can be used in podalic extraction.

GYNÆCOLOGY.

Vascular Growths of the Urethra.—Dr. C. H. F. Routh reports* several cases of carunculæ of the female urethra. The disease is usually confined to the external meatus urinarius, where little red, mulberry-like growths, varying in size from that of a pin's head to that of a hazelnut, are to be seen surrounding the opening. In consistence they vary from a mere pulp to a marked induration. In many cases, where no such tumors are to be seen on a superficial examination, they will be found lying within the urethra itself. They are the seat of exquisite pain, and are accompanied with most agonizing dysuria. Not unfrequently they are the cause of an existing vaginismus. The growth itself is insensible. The mucous membrane, on which these tumors grow, is the sensitive part, since

* Obstetrical Journal of Great Britain, December, 1874.

a microscopic examination of the diseased tissues show an absence of all nerve elements. Occasionally a muco-sanious discharge, which is somewhat offensive, is seen. The disease is most commonly met with among middle-aged females. It is not so frequent among women of acknowledged imprudent habits as among those who are prudent, cleanly, and continent. Removal of the tumor, with cauterization of the bleeding surface, is the best method of treatment. In cases where there is fear of hæmorrhage, the growth may be transfixed and ligated.

Uterine Sarcoma.—After giving a complete history of six cases, previously reported by Professor Spiegelberg, Dr. Kunert gives* the following résumé of the chief points in the pathology, course, diagnosis, and treatment of this affection. This disease has never been known to occur before puberty. Its progress is rapid, and terminates fatally. Dr. Winkel cites one case of a reported cure. Carcinoma of the body of the uterus is very rare, and sarcoma is easily distinguished from carcinoma of the cervix whenever débris of the tumor can be found in the vaginal discharges. Hæmorrhage and pain occur early in the course of the disease, while immobility of the uterus is found later. The alteration in the general condition of the patient is the first symptom which usually excites suspicion as to the true character of the disease. As regards treatment, removal is the best course to be pursued. Where this can not be done, resort should be had to injections of carbolic acid, perchloride of iron, iodine, caustic potash, or to the use of the actual cautery.

Dr. Thomas advises, in a paper read before the New York Obstetrical Society, the entire removal of the growth by galvano-cautery, écrasement, excision, or the curette, and the cauterization of its base with chemically pure nitric acid. In cases where the os is closed, it should be first dilated by sponge tents. In rare cases, the growth terminates the patient's life rapidly; but it has frequently been known to last four or five

* Archiv für Gynakologie, vi. i.

years. Death is due to hæmorrhage, septicæmia, spread of the disease to neighboring abdominal viscera, disturbance of nutrition, or peritonitis. As a rule Dr. Thomas does not consider that pain is a constant or early symptom of the disease.

Incision of the Cervix Uteri.—Prof. R. Olshausen* divides dysmenorrhœa into three varieties, according as its origin may be considered obstructive, congestive or ovarian. Incision of the cervix uteri is to be used only in that class of cases, small in number, where the dysmenorrhœa is dependent upon the small size of the external os. In cases where either the internal os or the cervical canal is found to be narrowed by some lesion of the lining mucous membrane, the cervix uteri should never be incised. In all cases where the sound enters the uterine cavity suddenly, as if passing some contracted spot, whether that contraction be owing to disease or is the normal condition of things, an incision should be made. Wherever sterility is found to exist with mechanical dysmenorrhœa, there is always a pathological contraction of the external os. In those cases in which we are attempting the removal of sterility the external os may be incised, even though it appear to be normal. It is a well-known fact that the dilatation of the os, as occurs in labor, is favorable to a subsequent conception, since many women, who have been sterile for a long time, give birth to a number of children rapidly after the birth of the first child.

The best instrument to be used in performing incision is Sims' blunt-pointed bistoury. The blade should in all cases be passed as high up as it is desirable to make the incision, and the cut should be made from above downwards. The instrument should then be withdrawn, and the opposite side cut in the same manner. It is very important that the external os should be so deeply cut as to leave an open slit. The lips are then to be kept apart by tearing any adhesions which may form every twenty-four or forty-eight hours, and a solution of the

* Volkmann's Sammlung klinische Vorträge 67, 1874.

perchloride of iron should be subsequently applied. Sponge tents should never be used, since they are liable to produce septicæmia. The operation should never be performed if there is any inflammatory process going on in the neighborhood of the uterus.

In those cases where there is anteflexion of the uterus, accompanied by sterility, a good result seldom follows the ordinary lateral incisions. In these cases a wedge-shaped piece should be cut out the anterior lip. The bilateral incision of the os uteri is recommended in all severe cases of uterine catarrh, since internal medication of the uterine cavity is then rendered more easy of application.

The operation of incision is one worthy of the most careful study, and requires the greatest care in the performance of it, as well as in the after-treatment of the patient.

Solid Tumors of the Ovary.—Dr. Leopold contributes* a valuable paper on this topic. His résumé of the subject is drawn up after a careful examination of fifty-six cases. He considers that solid tumors of the ovary are very rare, forming about one and a half per cent. of all ovarian tumors. As a rule, they retain to a certain degree the shape of the ovary, thus presenting a striking contrast from other ovarian tumors, which are very irregularly shaped. Their consistence varies from that which almost resembles a fluid to that which possesses extreme hardness. The external coat varies greatly in thickness, and upon this amount of thickening depends the relative rapidity of development of the tumor. In cases where the pedicle is short, the tumor may become wedged down between the uterus and the rectum. The presence of a tumor in the ovary rarely affects the uterus.

These tumors may be divided into fibroma, enchondroma, sarcoma, and carcinoma. The fibromas are either simple or complex. Enchondroma of the ovary is very rare, as is also ovarian sarcoma. As regards menstruation, it is possible for the

* Archiv für Gynækologie, vi., 2.

catamenia to continue regularly even after both ovaries are removed, or when both are degenerated.

In the cases reported, ovariotomy was performed eight times, three of the operations resulting successfully. In one case Cæsarean section was performed, owing to a narrowing of the pelvis from the presence of an ossified fibroma.

Lupus of the Genitals.—In a clinical lecture at L'Hôpital de la Charité, Dr. Burnutz gives the following summary of this rare affection.* The disease is analogous to lupus of the face, the only difference being those due to the anatomical dissimilarity of the two regions affected, a dissimilarity, however, which greatly aggravates the prognosis of genital lupus. There are two forms of the disease: the tubercular and, what is rarer, the erythematous; but both varieties are usually found together. The mons veneris, the external surface of the labia majora, and the perineum are the parts usually affected. The diagnosis is difficult, as many who suffer from the disease have such doubtful antecedents as to suggest the possibility of the case being one of syphilitic origin. The color of the diseased part is dull red; its surface is covered with a layer of imperfect epithelium, and its tendency is to break out into ulcerations, which, in turn, heal, leaving a series of cicatrices and ulcerations to be noticed on the same surface. It is the result, as a rule, of bad air and poor living. The treatment should consist in an attempt to improve the general health, while portions of the growth are excised, and lint, dipped in tincture of iodine and an opiate preparation, is applied, so as to exert a constant pressure on the part. As internal remedies, arsenic, cod-liver oil, and iodine are advised.

Cystitis in Women.—Dr. J. B. Hicks,† in a valuable paper on the local treatment of cystitis in women, considers that but little dependence is to be placed on the efficiency of internal remedies, unless, indeed, an exception be made in favor of those medicines which are able directly to alter the acidity or alkalinity of the urine, as the case may be. Opium he considers as

* Archives de Tocologie, July, '74. † Brit. Med. Journal, July 11, '74.

the most valuable remedy, not only because it relieves the pain which is so serious a symptom of the disease, but also because it has a decided effect in lessening reflex sensitiveness.

In all cases of severe acute cystitis, characterized by pain, by a frequent or constant desire to micturate, by severe scalding along the urethra during micturition, by a constant and intolerable bearing down, and by a urine loaded with mucus, pus, and blood, the first thing to be done is to ascertain the reäction of the urine. As a rule, it will be found to be alkaline, although before pus appears in the urine it may be acid. If it is acid and ammoniacal, pass gently a gum-elastic catheter (open at its end instead of its side) into the bladder; draw off the urine; withdraw the catheter just without the neck, when the bladder is on the point of being emptied; then, by means of a syringe, wash out the bladder with warm water slightly acidulated with nitric, hydrochloric, or acetic acid (two drops of the acid to an ounce of warm water); inject until the patient expresses a desire to micturate, when the injection may be allowed to escape. This injection is to be repeated until the urine seems clear of phosphates and mucus; usually about half a pint of acidulated water will be found sufficient. Having thus washed the bladder clean, inject about a grain of morphia dissolved in an ounce of water. Withdraw the catheter, instructing the patient to retain the injection as long as possible. In all cases allow the catheter to rest just without the neck of the bladder, using force enough to carry the injection through the sphincter into the bladder. This treatment should be repeated twice daily. In cases where the urine is not markedly alkaline, the bladder may be washed out with a warm solution of permanganate of potash, instead of acidulated water. After a few days of this treatment, a solution of chlorate of potassa (four grains to the ounce) may be used in place of the permanganate of potash, and afterwards the morphia solution. Where there is no blood in the urine, nor any constitutional effect experienced from the morphia, two grains may be used instead of one.

As the acute symptoms subside, more astringent washes may be used, such as tannin (three grains to the ounce), or three or four drops of solution of perchloride of iron, the morphia injection being used subsequently. In cases where the urethra becomes very tender, it is well to omit the catheterization for a day or two. If, after the main symptoms subside, the urethra still remains tender, a bougie, smeared with tannin and dipped in gum-water before using, may be introduced with decided benefit.

In cases where the cystitis has become chronic, it is well to use a solution of nitrate of silver (from five to ten grains to the ounce) or perchloride of iron (ten minims to the ounce) before injecting the morphia. The application is to be repeated a week later.

In the acute stages, the warm hip-bath and sponging of the genitals, with perfect rest in bed, are to be insisted on, and no alcoholic beverage whatever is to be allowed.

Dr. J. Goodman* believes that by far the best treatment of this class of cases is the insertion of a drainage-tube, thus preventing the retention of any urine in the bladder. The tube must be removed every three or four days for the purpose of cleaning it, which is best accomplished by placing it in acidulated water.—*Bost. Med. and Surg. Jour.*

ANALYTICAL DEPARTMENT.

"Qui e nuce nucleum esse vult, frangit nucem."—PLAUTUS.

Noxious and Offensive Trades and Manufactures, and the Means of Abating the Several Nuisances from Them.—Dr. Letheby, in concluding an interesting article on the above subject, summarizes as follows his recommendations as to the best

* See American Journal of Obstetrics, November, 1874. Article by Dr. John Goodman, of Louisville, Ky.—E. S. G.

means of abating these nuisances in the manufactures which give rise to poisonous gases:

1. That all noxious and offensive operations should be carried on, as far as possible, in air-tight chambers, which can be ventilated by means of fans, or by the chimney draft.

2. That all condensable and absorbable gases and vapors should be passed through condensers and absorbents, best suited for their absorption, as water in spray, and scrubbers charged with water, oil of vitriol, or alkaline solution.

3. That, when necessary, these scrubbers should be supplemented with special purifiers, as hydrated oxide of iron, hydrate of lime, etc.

4. That organic vapors and sulphuretted hydrogen and empyreumatic matters should be conveyed to the furnace fire and destroyed. In carrying out this part of the process, it is necessary that all steam should be condensed from the vapors, by cooling them thoroughly before they reach the fire, as otherwise the fire is apt to be put out by them. The fire which is best suited for this purpose is that which is actually used in manufacturing operations, as special fires are very apt to be neglected; and the best place for the entrance of noxious vapors is at the back of the ash-pit immediately under the fire-bars, as by this means a draft is secured (by closing the ash-pit), and the vapors are made to pass through the glowing coals of the fire.

5. All offensive materials should be brought to the works, or carried away from them, in properly constructed carts or tanks, which can be closely covered; and all such material when stored at the works should be kept in close tanks or chambers, ventilated, when necessary, by the scrubbers or furnace-fire. Lastly, all the operations should be managed with care and attention to details.—*Med. Press and Cir.*

On Apoplexy from Miliary Aneurisms.—The views advanced a few years ago by Charcot and Bouchard, and which were confirmed in Germany by Zenker—viz., that spontaneous apoplexy

of the brain depends on the bursting of small "miliary" aneurisms, has recently received the support of M. Roth, who has based his conclusions on eight post-mortem examinations. These aneurisms never exceed the size of a pin's head, and are often strung along on the vessels in great numbers something like beads. They occur most frequently in the corpus striatum, including the nucleus lentiformis and in the optic thalamus, next in frequency in the corticle part of the cerebrum, next in the mesencephalon and gray substance of the cerebellum, but very seldom in the white substance of the cerebrum or cerebellum.

Spontaneous recovery by thickening of the intima sometimes occurs, and ordinarily follows a rupture which does not involve the whole wall of the vessel, or only determines the effusion of a small amount of blood, but which frequently, and indeed most frequently in the corpus striatum and thalamus opticus, occasions abundant hæmorrhages, in the midst of which the aneurism which is to blame is not to be found, but only the place of rupture. Increase of pressure of the blood from hypertrophy of the left ventricle, without valvular insufficiency, is a frequent but not constant cause of this development, and can be anatomically demonstrated. The most important cause, however, consists in alterations of the walls of the vessels, the origin of which the author does not find, as other authors do, in a periarteritis or endarteritis, but in a state of diffuse cylindrical dilatation, with hypertrophy of the wall of the artery, and this condition he has often observed in advanced age in the artery of the fossa of Sylvius and its branches, and also in other arteries of the body. There now follows, when the process is much advanced, a shrinking of the media, accompanied in some cases by amyloid degeneration of the muscular coat. Subsequently, as a result of this shrinking, the circumscribed protrusions occur, and not until this period do we have the thickening of the intima or adventitia, constituting endoperiarteritis, which in some measure compensates for the shrinkage of the median coat.—*Cor. f. Schweitzer Aerzte.—Berl. Klin. Woch.*

Pulmonary Cavities Treated by Injections through the Chest Walls.—Dr. William Pepper ("American Journal Medical Sciences") gives an exhaustive study of the above subject. He makes evident the following points:

(1) The idea of opening lung cavities by an incision through the chest walls is at least as old as Baglivi; but owing to the very imperfect character of early clinical records of thoracic diseases, it is difficult to show that such an operation was actually performed before the last century, or, more probably, the present one.

(2) The idea of conducting continuous treatment of such cavities by local applications, made directly through the chest walls, has been seriously entertained only within the past few years.

(3) The possibility of puncturing the lung in a state of health, with delicate needles, was demonstrated in a few instances by the advocates of acupuncture, and more recently in the lower animals by Koch and others.

(4) The operation of Storks and Mosher have shown that lung cavities are very tolerant of external interference, and that they may be cut down upon and opened, canulæ introduced and retained, and various medicinal agents injected in solution or spray.

(5) The independent observations, reported in full in this paper, show that the continuous treatment of lung cavities by repeated injections, by means of delicate canulæ, may be conducted without pain, hæmorrhage, traumatic irritation, or interference with internal medication and hygenic measures.

(6) The cases best adapted for this local treatment are those in which a single superficial and circumscribed non-tuberculous cavity exists; but even when there is implication of the rest of the lung, or incipient disease of the opposite lung, some benefit may be expected.

(7) The mode by which such treatment does good is chiefly by altering the character of morbid action in the walls of the cavity, diminishing the amount of purulent formation, as well

as the degree of hectic irritation and the danger of constitutional infection. A certain amount of rest for the walls of the cavity is secured by the marked relief afforded to the cough. The cases recorded show that this treatment may favor the cicatrization and contraction of such cavities.

(8) In the cases treated (over seventy injections were given) it has shown itself free from all danger, and of a certain *degree of positive clinical value,* since, during its use, uniform improvement, to an exceptional degree, has taken place in both the general and local conditions of the patient.—*Detroit Review of Medicine.*

Masturbation Cured by a Vegetable Dict.—Dr. Willard Parker ("Medical Times") records the following case: A boy at five years commenced self-pollution; this habit was continued for four years. Every expedient had been resorted to in order to break the habit, without avail. By inquiry, it was found that the boy had been in the habit of eating tenderloin steak three times a day, thus living largely on nitrogenized diet. On examination, his urine was found loaded with urea and uric acid. The boy was deprived of this animal food, and placed on vegetable diet. In less than two months he had no desire, and hence discontinued masturbation.

CLINICAL RECORDS.

"Ex principiis, nascitur probabilitas: ex factis, vero veritas."

ART. I.—CALCULUS—REPORT OF CASES. By A. B. Cook, A. M., M. D., Professor of the Principles and Practice of Surgery, Kentucky School of Medicine, Louisville, Ky.

CASE I.—J. S. W., of Kentucky, age forty-five years, a farmer, consulted me October 20, 1866. He was tall, slender, very much emaciated, spanæmic and debilitated from long and

continued suffering. He first noticed derangement of the urinary organs twelve years previous, which was indicated by pain at intervals in the kidneys and bladder, frequent desire to urinate, accompanied with a burning or stinging sensation, at which times he observed white or chalky sediment in the urine. Six years prior to the time he consulted me, he commenced to suffer from the symptoms of vesical calculus, the principal features being pain and irritation in the bladder, occasionally bloody urine, painful and frequent urination, pain in the glans penis, and oftentimes sudden stoppage of urine until the position was changed; with the sensation of some hard, loose body moving in the bladder and obstructing the passage. These symptoms steadily increased in severity, wholly incapacitating him for all business. When he came to Louisville he was scarcely able to stand upright.

The introduction of a sound readily detected a calculus, which appeared to be small and movable, in the bladder. The lateral operation was performed 26th October. The deposit, phosphatic in character, formed a basin in the bladder, which had to be quarried out and scraped from the mucous membrane; in addition to this, there was one detached spherical calculus which rested and moved in the basin, and which the patient had often felt moving to and fro in the bladder; the phosphatic basin prevented the walls of the bladder from contracting on it, and left it free to move; it was as large as a good-sized marble. There was considerable hæmorrhage, due to the division of the enlarged prostatic vessels, which was soon arrested by gentle pressure with a sponge wrung out in ice water. He made a good recovery, and was discharged November 29th. The treatment consisted of tonics, stimulants, and nourishing diet. The fragments of the calculus weighed two ounces.

Case II.—Jesse F., of Indiana, age twenty-two months. This child had been afflicted from early infancy with frequent, painful and difficult urination. The prepuce was much elongated; sound readily detected a calculus. The lateral operation was performed December 18, 1866, and the child returned

home December 28; the incision had healed, and the case required no special treatment. The calculus weighed ninety grains, centre uric acid, surface phosphatic.

The two above patients were operated on in the presence of the united classes of the Kentucky School of Medicine and the University of Louisville.

Case III.—F. G., of Tennessee, age sixty-four years, a farmer; saw him February 15, 1870, he had been suffering for eight or ten years, occasionally passing gravel. His health was much impaired by long suffering and frequent attacks of chills, often of the congestive type. The urethra was exceedingly irritable and tender, the bladder was very sensitive, contracted, and the walls were thickened, and the mucous membrane was much corrugated.

After a few day's preparatory treatment, the lateral operation was performed March 9, 1870. The reäction from the chloroform was good, and the patient did well until the third night after the operation, when he had a congestive chill, although he had taken eight or ten grains of quinine daily for several days. For five days thirty grains of quinine were administered daily, and then for several days fifteen grains were given daily, opiates were given when necessary to procure rest, and bicarbonate of potash in fifteen-grain doses three times a day. He improved rapidly under the increased doses of quinine, and made a good recovery. He was discharged 26th of March. The culculus was of the uric acid variety and weighed one ounce. He enjoyed uninterrupted good health after his return home.

Case IV.—W. R. E., of Kentucky, age thirty-two years, a laborer, lymphatic temperament, scrofulous diathesis. This patient, when a youth, had hip-joint disease in the right iliofemoral articulation, which resulted in necrosis of the femur and suppuration. He recovered about the age of twenty-one years with two inches shortening of the right leg. He had suffered from symptoms of calculus for about six years. The urethra was naturally small, only admitting a medium sized director,

the perineum was unusually deep, and the space between the tuberosities of the ischii was small in consequence of the obliquity and distortion of the pelvis, the result of the hip-joint disease. The lateral operation was performed April 11, 1874. After reäction from chloroform, he was ordered twenty-five drops of laudanum to quiet pain, which was all the anodyne he required. He took ten grains of quinine daily in divided doses and bicarbonate of potash. He made a rapid recovery, was walking about his room in one week after the operation, and returned home April 23. The calculus was phosphatic, and weighed one ounce and one scruple.

In all of my cases, except the child, I administered from ten to fifteen grains of quinine daily for four or five days prior to the operation, and believe that the patients made a better recovery from its use.

CASE V.—J. H., of Kentucky, age twenty-eight years, a merchant. This patient had been passing gravel at intervals for several months. I saw him March 6, 1874; he had an encysted urethral calculus, located about the commencement of the bulbous portion of the urethra, the projecting apex of which could be felt with the sound. The calculus was removed at the first examination with Civiale's tri-bladed urethral forceps and the hinge-joint scoop. The patient returned home the following day, and has not since had any return of the deposit.

The calculus was phosphatic, and weighed one scruple. Four of the above cases occurred in patients who were born and reared on lands contiguous to the Ohio river—three in Kentucky, and one in Indiana. One case came from the high lands of Middle Tennessee; this gentleman had a son, a physician, from whom a large calculus had been removed a few years previous to the operation on the father; the two calculi had similar characteristics.

ORIGINAL CORRESPONDENCE.

"Sit mihi Fas scribere audita."

NEW YORK, April 7, 1875.

Professor E. S. Gaillard:

Dear Sir,—The old, but terribly important, subject of phthisis and tuberculosis is again occupying the attention of the Societies. Dr. Charles Heitzman, who, as his name indicates, hails from the land of "beer and brains," recently read an elaborate paper on Tuberculosis before the County Medical Society. It is extraordinary how many German physicians one meets with here; but when we remember that New York is said to have, with two exceptions, the largest German population of any city in the world, perhaps this is less to be wondered at. Dr. H. has investigated the subject of tuberculosis of the lungs by the study of three hundred autopsies in Vienna. He formerly published in that city the results obtained from two hundred of these, and on the present occasion announced his views as confirmed or modified by his more extensive series of observations. After an historical sketch, in which he alluded to the researches of Lænnec, Andral, Louis, Rokitansky, Virchow, Niemeyer, and Villemin, he described four forms of tuberculosis. (1) Chronic tuberculosis (so-called clinically). It was better to term it localized tuberculosis. The disease is confined to the apices of the lungs, and generally terminated favorably (unless new deposits took place) by the formation of a fibrous capsule around the deposit, constituting cirrhosis, or, as some call it, pigment infiltration. (2) Subacute tuberculosis. This ought properly to be called disseminated or dispersed. New infiltrations or nodules (between which there is no essential difference) constantly formed, and all stages of transition towards ulcerative degeneration met with at the same time. Cavities formed, either parenchymatous or bronchial. Sometimes ulceration of blood vessels, resulting in copious hæmorrhage. This is the tuberculous phthisis of Lænnec. (3) Tuberculous pneumonia. Relatively rarer, but of many varieties. (4) Actual or miliary

tuberculosis. Both lungs affected. The nodules, which vary in size from hemp seed to poppy seed, are found also in the meninges, liver, spleen, peritoneum, and other tissues and organs. This form differs from the subacute variety only in being more widely diffused and more rapidly fatal.

Dr. Heitzman then propounded a number of conundrums as to what were the essential characteristics of tubercle, and finally concluded it to be a new formation without blood vessels, and yet the result of inflammation. After a digression on the subject of inflammation, in which he accepted Rokitansky's views, as opposed to Virchow's, he went on to say that tubercle occurs only in tissues supplied with blood vessels; but the reason that tubercles themselves are not vascular is because, at the time they originate, no new blood vessels are in process of formation. Tubercle is then a protoplasm, an inflammatory neoplasm, a distinct *tissue*. All the metamorphoses in the lungs, previously alluded to, easily explain themselves on this hypothesis. Dr. Heitzman concluded by saying that he considered scrofulosis and tuberculosis identical, as Lænnec pointed out.

Dr. Francis Delafield, President of the Pathological Society, remarked that the various and conflicting opinions which Dr. H. had quoted in his historical résumé, show that the whole subject of tuberculosis is still in a very unsettled state. These questions are continually recurring, what is the relation between scrofula and tuberculosis, between chronic and miliary tuberculosis, and between inflammation and tuberculosis? There seems to be a growing tendency to go back to the opinions of Lænnec. Thus, Rindfleisch (to whom Dr. Heitzman had not alluded) contends, in Ziemssen's Cyclopædia, that scrofula and tuberculosis, and acute and chronic tubercle, are identical, and that all phthisis is tubercular. His style is so clear and impressive, and his anatomical points so minutely studied and ably maintained, that the article, when translated, will, no doubt, attract many adherents in this country. Wilson Fox holds the same views in England. Dr. Delafield, however,

could not subscribe to them. Here, in New York, we see very little scrofula, as it is understood in Europe. We have some acute phthisis, and a great deal of chronic phthisis. This is chronic inflammation, but it is *not* tubercular. Cirrhosis of the lung is the most common results found at autopsies, and not the cheesy degeneration of tubercle. He considered it a mark of considerable rashness for any one to commit himself definitely on this subject. New points are continually coming up, and we may be forced at any time to change our present views.

Dr. E. D. Hudson took a very different view of the subject from Dr. Heitzman in his paper before the Acamedy of Medicine, April 1st. It was in a great measure practical, its title being, "The Pathology and Etiology of Pulmonary Phthisis, with Special Reference to its Prevention and Treatment," and without containing much that was new or original, gave evidence of careful study. He, too, commenced with the inevitable "historical résumé," giving an outline of the various opinions held by pathologists. All phthisis, he said, was formerly supposed to be tubercular. Later, two forms were recognized; that due to gray tubercle, and that which was the result of inflammation. He considers that there is nothing specific about gray tubercle. There is no specific tubercle corpuscle, just as there is no specific typhoid or even exudation corpuscle. They are all white corpuscles of the blood, which undergo peculiar modifications according to circumstances. Tubercle contains only the elements found in the normal lung. It is now acknowledged that lymphoid tissue exists in the lung, and he thinks, with Virchow, that tubercle is simply the result of cell changes in this tissue, produced by inflammatory action. In favor of this pathology are the facts: (1) That caseous seams are so seldom seen in the miliary tubercle of children; (2) that miliary tubercle so often proves fatal without extensive destruction of lung tissue. This view does not deny the possibility of hereditary taint, but does deny the specific origin and character of the disease. It denies the tubercular diathesis; but

not that there may be a dyscrasia (perhaps a debility located in the adenoid tissue of the lung), which may favor the development of phthisis. Not more than 25 per cent. of the children of consumptive parents ever have phthisis. The *predisposing* causes comprise all violations of hygienic laws, especially improper and insufficient food, and the want of pure air; the poor of large cities suffering the most from these. Climate has a direct relation to the disease. The *exciting* causes are inflammatory thoracic diseases. Infiltration of the fibroid tissue of the lungs follows all forms of interstitial thoracic inflammation; though thoracic inflammation of any kind may prove entirely harmless, if the system is in such a condition to surmount it. Pneumonia, pleurisy, bronchitis, and even throat disorders (by producing pulmonary hyperæmia and eventually inflammatory processes) are the antecedents and causes of phthisis. Dr. Hudson spoke at length of the prevention of phthisis, which really includes every department of public and private hygiene, and dwelt particularly on the responsibility of the family physician, who should watch the individual from infancy up, especially at puberty, and give his advice as to the choice of a business or profession. All chest affections, however trivial, apparently, should be cured as promptly as possible. The treatment was to be always supporting. It included three classes of agents, (1) Food; (2) Chest expansion; (3) Climate. There were many spontaneous cures. Cod-liver oil is preëminently the best medicine. There is no substitute for it; but its efficiency may be increased by the phosphates, pancreatin, and alcohol. Tonics also of various kinds are useful, and fresh air and proper exercise indispensable.

Dr. Leaming complimented the Doctor on the thoroughness of his paper, but disputed many of his pathological views. He spoke of plastic pleuritis as a frequent cause of phthisis.

Dr. Harris, Registrar of Vital Statistics, said that there had been a steady, though moderate, diminution in the mortality from phthisis in this city during the last fifty years, and then made the startling statement that it still carries off no less than

forty per cent. of all who die between the ages of twenty and forty years.

The discussion of the subject is to be continued at a future meeting of the Academy.

Professor Otis related a very remarkable case at the last meeting of the Pathological Society. Somewhat more than four years ago he had been called to Lake George to see the patient, a gentleman of great muscular power, but who had had hip-joint disease when a child. Had never had syphilis, gonorrhœa, or any affection of the genito-urinary tract whatever. One day, while out rowing, he was suddenly seized with a desire to urinate, and soon after the bladder was evacuated, this desire returned. This continued, with constant spasm at the base of the bladder, for a week, when he sent for Dr. Otis. The urine was found to be altogether normal, and there was no trouble at all, as far as could be ascertained, about the bladder or kidneys. This state of affairs continued for two years, only partially alleviated by narcotics and diluents. By this time catarrhal inflammation of the bladder was set up, and stone being suspected, Dr. Markoe was called in consultation. He was sounded, but with a negative result; though he now passed a considerable amount of calculous matter. The stone was therefore supposed to be encysted; so that it could not be detected. During the next year the patient's sufferings steadily increased, until they were agonizing. The spasm at the neck of the bladder was terrific, and the poor man had to pass urine every ten minutes through the day, and nearly as often at night, though sometimes he was slightly better. Drs. Van Buren, Gouley, and Markoe being in consultation, it was decided to operate for stone (even though there might be none present) as the only resort to relieve the cystitis and suffering, as well as to prevent disease of the kidney, if possible. The median operation was performed by Dr. Gouley, and, much to the disappointment of all, no stone was found. Still, considerable alleviation of the patient's sufferings was afforded. After a year of less suffering than before, the constant vesical and urethral spasm re-

turned as bad as ever. This was followed by a short interval of complete relief from his distressing symptoms, and now, for the first time, his wife mentioned casually that he had a lump in his back. The patient himself said that it had always been there, and attributed no significance to it. On examination, however, Dr. Otis found a distinct projection of the spine, between the seventh and eighth dorsal vertebræ. Dr. Van Buren being again called in consultation, agreed in the diagnosis of Pott's disease, and at their request, Dr. C. F. Taylor applied an instrument to remove the weight from the diseased vertebræ. He continued to wear this for nine months, but did not improve at all; the urinary trouble returning with great violence after the temporary relief. The pain, previously referred to the kidneys, and which had heretofore been seated lower down, was now on a line with the tops of the hips. It soon became impossible for him to wear the instrument any longer, and he now gradually failed. There was constant and agonizing spasm until within two or three days before his death, when there was superadded a new and excruciating pain in the glans penis. This was so urgent that he cried to his wife to bring him some snow, which he applied with the effect of instantaneous relief from both pain and spasm. He finally died in a uræmic convulsion. At the autopsy, half a pint of laudable pus was found in the peritoneum. This came from the sheath of the psoas, and two abscesses were discovered on the left of the spine. The posterior surface of the pleura of the left lung was found adherent. The bladder, kidneys, and testes were presented to the Society for inspection. The bladder was contracted, and its walls much thickened, but not ulcerated. It contained no stone; but there was a cul-de-sac behind the prostate which would have concealed a calculus admirably; and before the perineal section it had been supposed that the stone really lay hidden in just such a pocket as this. The right kidney was in a state of complete cystic degeneration. The left one was much enlarged and extensively ulcerated. One testis was atrophied, but the other was greatly enlarged and contained an abscess. Dr. Delafield

had examined the larger testis and kidney, and pronounced them both typical of tubercular inflammation. In conclusion, Dr. Otis said that the case had been a complete mystery to him till the discovery of Pott's disease. He regarded this as the cause of all the trouble, and that the irritation in the bladder was reflex from the diseased spine. The remote cause of Pott's disease might have been the coxitis when a child, and the exciting seemed to be an injury to the spine, which it was ascertained the patient had received about five years ago, and which therefore antedated all the symptoms of bladder trouble.

Dr. Delafield then related a case which had occurred recently at the Roosevelt Hospital, and which came in, he said, appropriately after Dr. Otis'. The patient strenuously and repeatedly denied ever having had syphilis. Some time ago one of his testes had received a severe injury, and inflammation of the organ, followed by cystitis, was set up. After a time vomiting occurred, and then coma ensued, and the man died. Well-marked tuberculosis of the testis, ureter, and kidney of the affected side was found, and the bladder was in a state of chronic inflammation. The most remarkable lesion discovered, however, was in the brain. The pia mater was everywhere the seat of inflammation, and scattered all over it, extending between the convolutions of the brain, were small, gummy, or gelatinous tumors, such as are entirely characteristic of specific disease. The interesting point about this case was, whether such lesions could exist without being caused by syphilis, since there did not seem any other sufficient reason for supposing that the man had ever suffered from it.

Dr. Delafield next cited a case to show how death sometimes occurs entirely without appreciable cause or lesion. A previously healthy woman, who had one child, gave birth to a second one in a perfectly natural labor, followed by no unusual hæmorrhage. She was quite well for a short time, but fatal syncope occurred two hours after her delivery. At the autopsy all the organs were found entirely normal, except the stomach, which showed trifling signs of alcoholism. The only other

point not natural noticed was, that the blood remained fluid, though sufficient time had elapsed since death for it to coāgulate. Dr. Delafield was able to offer no explanation of the cause of death in this case.

In this connection, it is interesting to recur to a paper on "Sudden Deaths soon after Parturition," illustrated by a number of cases, published by Dr. Madden, of the Rotunda Dublin Lying-in Hospital, in the "American Journal of Obstetrics" for August 1871. According to the views of this author, death may have occurred in the present instance from the entrance of air into the open uterine sinuses, or, possibly, from what he terms "idiopathic asphyxia."

Two coroners' cases have occurred here within a short time which have attracted a good deal of public attention, and both of which reflect severely on the management of affairs by the Commissioners of Charities and Correction.

The first was that of Jacob Stockvis, a person in excellent circumstances, who wandered from his home while suffering from mental aberration and unable to speak; was arrested for drunkenness and *disorderly conduct*, sentenced to *six months* in the work-house, and died in a few days at Blackwell's Island. The jury, upon which were two able medical men, and whose foreman was General Siegel, seemed to have given the case an unusually thorough investigation, and found that the deceased came to his death by phlegmonous inflammation of the arm and softening of the brain, and that his condition was aggravated and hastened to a fatal issue by exposure and by want of medical aid and proper treatment and nourishment after his arrest, while confined in the station-house, the police-court prison, and in the work-house on Blackwell's Island. The verdict also declares that the system now prevailing under the authority of the Police Commissioners and Commissioners of Charities and Correction relative to medical inspection and aid after the commitment and during the confinement of prisoners is defective; and that the whole management of affairs at the work-house is irrational, and the treatment of prisoners in many respects

degrading, and demanding thorough investigation and reform. After further severe strictures, it concludes by recommending that a competent medical officer should be in attendance at each of the various police courts while in session, for the examination of the condition of the prisoners, if necessary, to the end that a recurrence of such deplorable results as in this unfortunate case may become impossible. In order to follow up the verdict, Coroner Kessler issued warrants for the arrest of Dr. Jayne, physician at the work-house; Robert Cunningham, keeper of the Fifty-Seventh-Street Court Prison, both of whom were indirectly implicated by it; and each had to give $2,500 bail to await the action of the grand jury. The other case shows the folly of keeping the public obstetrical service at Charity Hospital, which can only be reached by water, and how much we really need a maternity hospital in an accessible position.

About a week ago a young woman in labor was brought by ambulance to the Bellevue pier, at 2½ A. M. On getting her on board the boat, supposed to be fitted up for such emergencies, it was found that the cabin was cold, and that there were none of the appliances necessary for such cases on hand. The patient died suddenly at five o'clock, very shortly after her delivery, and the coroner's jury found that the cause of death was syncope, superinduced partly by imprudent exposure on her part, and partly from a want of the needful medical appliances on board of the hospital boat. It censured the commissioners directly for permitting such negligence; but exonerated the attending physician from all blame in the fatal termination of the case. For the present, comfortable rooms are to be fitted up near the dock for the reception and care of similar cases. It will be a long time before New York is perfect in any of its great municipal departments; but occassionally efforts are made towards improvement. In none is reform more needed than in the sanitary condition of the public schools; and Dr. Moreau Morris, formerly City Sanitary Inspector, has recently addressed a forcible letter to Commis-

sioner Baker, of the Board of Education, calling attention to the defective and injurious means of ventilation and heating, as well as the overcrowded condition of the school which his own son attends; the lad having been seriously ill in consequence. He found fifty pupils packed in a room which allowed but eighty cubic feet of air space to each child, instead of the twelve hundred, absolutely necessary for the maintenance of health. Dr. Morris rightly thinks that the health question is one that overrides all others with reference to pecuniary outlay, and that parents would willingly pay the expense of introducing improved means of ventilation in the schools.

Then at the last meeting of the County Medical Society Dr. O'Sullivan, who, we noticed by the Medical Weekly, is on the Committee of the American Medical Association to report on ventilations of dwellings, school houses, and other public buildings, introduced a series of resolutions, requesting the Society to use its influence to secure the improvement in the sanitary condition of the public schools that is so urgently demanded.

Before leaving the subject of public hygiene, we will mention that Dr. Morris has also just written a letter to Professor Chandler, President of the Board of Health, in which he urges that Board to interfere and procure the efficient cleaning of the now filthy streets, which he says are in precisely the same condition as three years ago, when an epidemic of cerebro-spinal meningitis ensued, which destroyed 761 lives in the space of ten months.

A short time ago Professor Chandler delivered a very brilliant lecture on Spectrum Analysis at the School of Mines, Columbia College. For purposes of illustration he used the magic lantern, with the calcium light, to throw photographs and colored views on the screen; but to exhibit the actual spectrum of various substances, employed the electric light, which he explained was not due to the combustion of the carbon points, but to the real conversion of electricity into light and heat, the correlation of forces being thus beautifully demon-

strated by it. By this means the spectrum of thallium, silver, didymium, copper, lithium, and other metals were admirably shown, and the "reversion of the spectruma" satisfactorily exhibited in the case of sodium. He explained the application of the subject to astronomy, showing how it had been demonstrated that the sun and fixed stars are composed of incandescent metals, surrounded by gas, while the comets and nebulæ are composed of gas, itself in combustion; and concluded with some account of its application to practical medicine, through the spectral analysis of organic substances. Dr. Chandler is undoubtedly one of the most popular and successful scientific men in this city. He is yet quite a young man, his age probably being between thirty-five and forty. After the completion of his studies at Heidelberg, he accepted a professorship at Union College, Schenectady, where he received the munificent salary of $400. Six or seven years ago he came to New York, and his annual income, from various sources, is now estimated at from $40,000 to $50,000. Talents and attainments such as his always command a premium.

Never was there a more bright and beautiful Easter Sunday than we have had this year. On that day we attended some very delightful services at the Roosevelt Hospital (which, it will be remembered, Mr. Erichsen pronounced the most perfect hospital building he had ever seen), held by the Rev. Alexander Thompson, D. D., its chaplain. An efficient choir of ladies and gentlemen volunteered for the occasion, and the floral decorations were appropriate and extensive. After the service, every patient in the hospital was presented with a bouquet by the ladies. Vast quantities of flowers are used here in the churches at Easter, and it has now grown to be the custom to distribute these among the various hospitals on the day following.

The Park Hospital, down by the City Hall, having been condemned as an unsafe building by the authorities, all its patients have been removed to Bellevue; so that there is now absolutely no hospital in the lower section of the city, where, on account of the frequency of accidents, one is most urgently

needed. It is a burning shame and disgrace that the grand old New York Hospital on Broadway was torn down; but the demon Gold, as is so often the case, robbed the sick poor of their ancient privileges; and a most infamous outrage was thus perpetrated on the New York public. In the course of time this state of affairs may be somewhat remedied, as the New York Hospital Society have bought property adjoining the Thorne Mansion, on Sixteenth Street (which they occupied a year since), where they propose to put up a central hospital; and then to establish small hospitals, of not more than four beds each, in different parts of the city.

The community is considerably excited just now over the death, from an alleged over-dose of conium, of T. W. Walker, of Brooklyn, a gentleman who has had quite a remarkable career in some respects. He was one of the sufferers from the National Hotel poisoning at Washington in President Buchanan's administration; during the war he was stabbed in the abdomen by an enormous bowie knife, which passed entirely through his body, protruding at the back; and in 1871 he was run over by a truck in this city, and horribly mutilated. One of the permanent results of the injuries which he received from the last accident was constant and violent contortions of the muscles of the face and eyelids, for which he was under the care of Brown-Séquard for some time. During the last few months, Dr. C. R. Agnew, the well-known oculist, of this city, has been attending him, and on Saturday last, Dr. Webster, the assistant of the latter, gave him, in divided doses, 180 drops of the fluid extract of conium, without producing any of the effects of the drug whatever. After having been fully informed as to the physiological effects of conium, and particularly cautioned when to stop taking it, he was then directed to go to Dr. Squibb, in Brooklyn, and procure some of his fluid extract; which he did. Dr. Squibb told him to take fifty drops every half hour till some effect was produced. On arriving at home, some four or five hours after leaving Dr. Agnew's, he immediately took the first dose, which produced an appreciable influence on his

system. Instead of stopping here, however, he took a second and a third dose; and died in about two hours after the latter. He had been a great sufferer for years, and there seems to be some ground for supposing that he really intended suicide; probably with the idea of becoming "a martyr to science" and obtaining notoriety by dying in the same manner as Socrates. At all events, he dictated a statement of all his sensations to his wife until immediately before his death, when he cried out for water. She ran to bring him a cup of coffee, and on her return, found him dead. No doubt the coroner's jury, whose sessions have been adjourned until next week, to allow time for the requisite examination of the various organs of the deceased, will clear up the matter satisfactorily. The case will certainly prove a capital advertisement for Squibb's pharmaceutical preparations.

STAR.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

"Judex damnatur cum nocens absolvitur."

COOPER'S DICTIONARY OF PRACTICAL SURGERY AND ENCYCLOPÆDIA OF SURGICAL SCIENCE. New Edition, etc. Volume II. London Pp. 1043, double column. 1872.

During the first half of the present century there were three noted professional gentlemen of London bearing the name of Cooper; two of them remarkable not only as surgeons, but also as well known authors. These were Sir Astley Cooper, next to John Hunter, the most celebrated of all who have practiced in Great Britain—his nephew Bransby—and Samuel, the author of the Surgical Dictionary which has passed through several editions in England, been republished in this country, and translated into German, French, Italian, and Russian languages; besides which, he is the author of other medical works. It is a notice of volume ii. of the last edition of this Surgical Encyclopædia, published in London in 1872, by Mr. Samual A.

Lane, Consulting Surgeon to London Hospitals, Member of the Examining Board of the Royal College of Surgeons, and assisted by thirty-four contributors, among whom are found the names of Messrs. Acton, Adams, Ansell, Robert Barnes, Wm. Coulston, Druitt, Erichsen, Henry Lee, Macleod, Poland, Snow, Wakeley, Spencer Wells, Erasmus Wilson, Ure, etc.; which it is now proposed to notice.

The first volume of the eighth London edition appeared in the United States in 1861, and has, therefore, been before the Profession of this country fourteen years. In a foot-note to its preface, the promise of an appendix was made, as was also the speedy appearance of the second volume; neither of which, we are sorry to say, has been fulfilled. Eleven years, as has just been remarked, elapsed between the publication of these two volumes; and as to the appendix which was designed to present "the latest discoveries and improvements, and was declared in 1861 absolutely necessary, especially as regards the articles belonging to the earlier letters of the alphabet"; we are gravely told, "it has been found that the facilities of introducing, either by the insertion of the original articles, or under various headings, have altogether superseded the necessity for an appendix." In a surgical dictionary, arranged as all others are, *alphabetically*, how all the important facts accumulated during eleven years could have been included between the letters beginning with I and conculding with Z, is beyond our comprehension. The proposition in itself seems to us to have been absurd and an impossibility.

The volume before us contains a brief biographical sketch of the author, wrttten by Mr. George Lewis Cooper, F. R. C. S. Samuel, the author, was born September 7, 1780. In early life he is said to have exhibited zeal for the classics; gave evidence of taste for surgery, and was soon admitted a pupil in the St. Bartholomew's Hospital. Mr. Abernethy is said to have regarded him with interest, and predicted his success. He graduated in 1803, and soon became a member of the Royal College of Surgeons. His first attempt at authorship was an octavo

volume on cataract. In 1806 he gained the Jacksonian prize for the best essay on diseases of the joints; and next year published the first edition of the "First Lines of Surgery," which passed through seven others. He had then begun his great work, the "Surgical Dictionary," of which eight English editions have been issued—the first one in 1809. In 1813 he was appointed Assistant Surgeon in the British Army, and was sent to Malta; the next year was promoted to a full surgeon, and in 1815 was at Waterloo, and often referred to the many operations he performed there. In 1826 he was elected a member of the Council for the Royal College of Surgeons, and on the resignation of Sir Charles Bell in 1831, he received the appointment of professor to the Chair of Surgery, and became also the senior surgeon to the University College Hospital, which he retained till 1847. He was then the colleague of the celebrated Mr. Liston. He edited the third edition of "Mason Goode's Study of Medicine," in four volumes, in 1832. This year he also delivered the Hunterian oration to the College of Surgeons. In 1837 he was further honored by his election into the Court of Examiners, and in 1845 he reached the distinguished position of President of the College of Surgeons. He died December, 1848, at Shepperton. Surgeon Cooper was a man of talent, of great industry and indomitable perseverance. Although, as has been said, he never attained to the reputation of Sir Astley Cooper, nor was he as brilliant as his associate, Liston; he was nevertheless a voluminous writer, a most careful operator, and an excellent lecturer.

Of all his published works, the one now under consideration is his best. The first American edition of it was edited by Dr. Physick's nephew, and was known as Dorsey's Cooper. The edition of Prof. David Meredith Reese, M. D., LL. D., was issued in 1859, and contained a supplementary appendix of 170 double-column pages, in very small type, and embraced a record of the operations, etc., of the Surgeons of the United States. Dr. Reese was born in Maryland, in 1800, and died a few years ago. He was professor in a Medical College in his

native State; then in New York City, where he edited the "American Medical Gazette," as well as "Cooper's Surgery." This work, his journal, and "Report on Medical Education to the American Medical Association," of which he was one of its vice-presidents, were his best professional contributions. The time may have come for just such another addition, to make known to the world what our countrymen have done for surgery during the past seventeen years; and to the surmise that the one making the suggestion should do this, the reply is given, the attempt might have been made but for the ruthlessness of the late war. The writer went out February, 1862, carrying his family Bible in one hand and his amputating case in the other; returning three years thereafter, found all he once possessed confiscated, even to library and private notes, which, together with two volumes in thirty, of a French Medical Dictionary, had been used as loose paper by a colored man; and what may yet be a more surprising fact, is that of all the property thus disposed of in Nashville, his alone still remains in the Treasury of the United States. Adding now, since he is too old to be much hurt by the confession, that of the three intellectual faculties, he is so defective in two of them that the ophthalmoscope and auscultation have ever been as sealed books to him—these facts may then account for the little he has done in a lifetime of nearly half a century in one of the noblest, most benevolent, and God-like callings upon earth.

The first subject we notice is the crucial one of inflammation. Section first reads thus: "On the difficulties of definition, and on the question whether processes of repair are to be considered inflammatory." For several years past we have taught that inflammation is invariably a destructive process and never reparative; that it is pathological and never physiological. How is it possible for two such opposite conditions, as health and disease to coëxist at one and the same time in any tissue or organ? If we would only adhere more rigidly to the classical definition, *rubor, tumor, cum calore, et dolore*, constituting true inflammation, there would be less confusion

among doctors on this all-important subject. It is not one or two or even three of these local manifestations, but the persistent presence of all these four local symptoms which is inflammation. It is true, we may not tell the precise moment when the physiological ceases and the parts pass into a pathological condition. Neither can we decide, as old as the world is, the exact moment when daylight begins; yet all can perceive the first ray of the rising sun. So in like manner may we recognize inflammation, yet not be able to define irritation, its immediate precursor. Be, however, this as it may, surely the time has passed for using the paradoxical, not to say absurd, expressions of healthy inflammation, adhesive inflammation, reparative inflammatory process; or the assertion that no wound can be repaired without inflammation, as was believed by England's great surgeon, Sir Astley Cooper, who taught that without it, the little wound in bleeding would necessarily be fatal; though John Hunter had made the distinction between this process and that of repair, and which was still more forcibly insisted upon by McCartney, of Dublin.

The article on inflammation in "Cooper's Surgical Dictionary" was written by Mr. Druitt, a well-known author and surgeon of London, and would make about 150 octavo pages. His general conclusions on this important subject are so valuable that we here epitomize them: Inflammation, he says, can best be defined to be a diseased process attended with hyperæmia and exudation, and is characterized by pain, heat, redness and swelling. The natural processes resembling it are erection, ovulation, menstruation, lactation, salivation, digestion; also, some morbid processes by insensible gradations, as neuralgia, hypertrophy, tumors, fluxes, hyperæmia; but as these occur (like pain) without inflammatory symptoms, inflammation therefore implies the *manner* in which these changes take place—that is, they occur rapidly, violently, and with pain. The diagnosis of inflammation is, therefore, chiefly based on hyperæmia, heat and exudation. The seats of inflammation are diseases *in* a part rather than *of* it, beginning thus with capillary embolism

or of afflux of blood elements. Inflammation is an expression of irritation or injured vitality, disturbing the process of nutrition. In good health and vigorous life, injuries may heal without nerve irritation or inflammation; while morbid states of the blood are the results of improper food, cold, etc., to be gotten rid of by oxydation and excretion. It is in bad health or impaired vitality where inflammation and fever occur. There is nothing conservative in these two processes. It is a pernicious doctrine to believe that Nature, herself injured, sets up inflammation to restore damage or recover health. It is the duty of the surgeon to remove irritation, that the natural processes of oxydation and elimination may be recognized and nutrition restored. Of the causes of inflammation, some are without, as wounds, etc., of which local inflammations are the the products and symptoms. In septicæmia the local symptoms are also secondary. The treatment of inflammation must be adapted to the cause producing it, the degree, the constitutional peculiarity, the organ or tissue involved, and the stage of the affection. Means employed in the earlier periods may be useless or pernicious afterwards. In the treatment, prevention should be the great study. In grave cases threatened with inflammation, rest is of great importance. Should a wound exist, guard against putrefaction, germs, etc.; after exhaustion and exposure, use the warm bath, moderate stimulants and nutritious food; in gorged condition of the alimentary canal give a purgative; in malarial cases, quinine; in gout, colchicum. For inflammation, we may bleed; for an oppressed organ, leech or purge (saline), or opium may be required. There are cases which may demand wine at their close. In every case before us we must recognize a brother of flesh and blood, whose soul and body require to be dealt with by moral and material agents.

These, all must admit, are excellent aphorisms in inflammation; confessedly one of the most important subjects connected with surgery, and upon which so much of its principles are based.

Of course, in a volume like this one, and limited to subjects whose words commence with the letters belonging to the latter half of the alphabet, coming to hand, too, three years after its publication, a brief notice of some of its most interesting topics is about all that can be expected. It will be recollected, too, that it dates back three years—i. e., 1872.

Diseases and excisions of joints are contributions to the work by Mr. Wakley, the editor of the London "Lancet," which has long held the leading position of monthly medical journals the world over. In penetrating wounds of the joints, the fact being recognized by the escape of synovia, the gravity of the case will depend much upon its nature, extent and size of the joint, the age of the patient, and whether it be in the upper or lower extremity. In their treatment, after the removal of foreign matter, perfect coäptation of the wound, absolute repose of the articulation itself, a roller properly applied, elevation of the limb, with cold affusion or irrigation, are commended. Should suppuration ensue, a valvular opening or evacuation by the aspirator, with prolonged local baths, tepid, might do best for conservative surgery.

In excision of the joints, the author of the article alludes to the case when the head of the thigh bone was first extracted by an unknown operator, and reported by Dr. Schliching in 1742, but states that the first regular excision (now termed exsection), was done by Charles White, of Manchester, in 1329.

Dr. Gross, in his great "System of Surgery," in two immense volumes, published (last edition) in 1872, gives credit to Antony White, of London, in 1822; then refers to Hewson, of Ireland; Oppenheim and Textor, of Germany; Suetin, of Belgium, and Brodie, of England. He, moreover, says that Sir William Fergusson first gave character to it in Great Britain, and that Professor Bigelow, of Boston, was the first to perform this operation in the United States.

In diseases of the joints, especially on excision of the articular surfaces, Mr. Price is said to have first removed the whole or certain parts of the articulation of the coxo-femoral; but

there is not even an allusion to what has been done on that subject in this country. One surgeon, Professor Lewis A. Sayre, of New York, is said alone to have already performed over fifty exsections at the hip-joint.

A great difference in the results of operations done at the hip has been observed in civil and military practice, particularly, in primary or secondary cases, as might have been expected; just as have occurred in amputations at the same joint. Indeed, so fatal have been the results of disarticulation at this joint performed immediately after the reception of an injury requiring so grave a procedure, that it is now almost condemned, especially in military surgery. It is the secondary operation at the hip-joint that are the most successful.

On the subject of stiff joints, or anchylosis, the reader is referred to the first volume of Cooper's Surgical Dictionary, in which is recorded an operation performed in 1826 by the late Dr. John Rhea Barton, then one of the most promising surgeons of Philadelphia, for complete loss of motion at the hip-joint in a sailor. This was done by sawing the bone in two at the trochanters, straightening the limb, using gentle motion to prevent reünion, and with such relief that the patient subsequently went out gunning. This was the first capital operation the writer ever witnessed; and it has so happened that during the past winter he had occasion to perform the same operation before the class in the University of Nashville; there was good promise of success, when, unfortunately, the health of the patient failed, and the position of the limb was abandoned in the effort to save life.

Mr. William Coulson, a well-known hospital surgeon of large experience in affections of the genito-urinary apparatus, and of high authority on these subjects, who does more just now than probably any one in Great Britain in lithotomy and lithotrity, furnished the contributions on these subjects to the surgical volume before us. These essays would fill an ordinary octavo volume. On the question of stone in the bladder, he says he has known the bladder opened seven times and no calculus

found; that the distinguished French Surgeon, La Peyronie, labored under the symptoms for years, but no one could find it until after death, when, by his own request, its existence there was revealed. As in sounding, the most expert may fail, it might, under these circumstances, be well to remember what our countryman, Dr. Physick, suggested, that of placing the patient nearly on his head in exploring the bladder.

Mr. Coulson very properly lays stress upon the point of being certain at the time of operating of the existence of the calculus. We recollect once venturing to operate contrary to this suggestion, but it was under peculiar circumstances. The existence of a calculus had been clearly diagnosed by several, and the distance travelled to see the case was considerable; but this procedure is very properly condemned. Commencing with the operation by the apparatus minor, or cutting upon the Grippe, known as the Egyptian, or Celsus; then describing the Marian method, or by the apparatus major; founded upon the erroneous impression of Hippocrates, that it was better to tear by dilatation a membrane than to cut it, and hence the number of instruments to dilate the membranous portion of the urethra. The modern median or Allarton operation of 1840 is next described. In 1863, Williams, of the Norfork and Norwich Hospital, published forty-four cases, which, up to that date, had been operated upon by this method, eleven had died, and that for the same period of the same number cut by the lateral operation, only two died. There are, all must admit, even in statistics and figures, certain things not only strangely bizarre, but inexplicable. The above result in that hospital is one of them; and we will venture the assertion, that lithotomists, at the present day, know that the median is a far more successful operation than the lateral. Who can explain how or why, in thirty-three days in 1866, a Nashville doctor should have cut seven times for stone, and then a period of five years elapsed before he secured the next five? Or, why, of the first nineteen, one alone died; then of the next six, three died; of the next twenty-two, none were fatal; but of the very next five

cases, four died; then of the next twenty-six, none have died? We are aware and acknowledge that a majority of lithotomists now prefer the lateral, and for which there are good reasons, but at the same time believe that the medio-bilateral is becoming more popular, and may yet supersede it. In reality, this would be but completing the circle around the neck of the bladder; or boxing the compass, as sailors say; coming back to where the Egyptian began centuries ago.

There is certainly no good reason why an incision should be made exclusively on the left at the neck of the bladder, except probably the facility of moving the right hand holding the knife from left to right. It is surely just as safe to cut on the right, or from right to left; this being unquestionably true, therefore, for removing a large calculus, it becomes a self-evident proposition, that it is safer to cut half an inch on the two sides than to make one incision an inch long altogether on one alone. Moreover, the section down to the groove in the median line becomes bilateral or partakes of it in introducing the finger or forceps for extracting the stone. So that, in reality, the crescentic incision of Dupuytren, the inverted Y and median amount to about one and the same thing.

We are surprised to find that so distinguished a surgeon and so honorable a gentleman as we know Mr. Coulson to be, should have so hastily concluded that the mortality is greater in the bilateral than in the lateral operation, with the statistics before him, or accessible to him. We know positively that he is in error as regards some cases to which he has referred. Alluding to Dupuytren's, himself the author of this method, he states that he had even lost nine patients out of thirty-seven; again, in forty-seven operated upon by Roux, Blondin, and Velpeau, ten of which he says proved fatal; then, he says, that Professor Eve, of the Nashville University, lost four in twenty-three, making his mortality four and tree-fourths. Again, referring to the danger from hæmorrhage, etc., he adds, that Professor Eve, of the United States, wounded the rectum in one of his operations. Now, here are the facts regarding

these statistics: In the July number of the "American Journal of Medical Sciences," vol. xxiv., new series, is a report of twenty-five cases of urinary calculi, twenty-three of which were cut bilaterally; of the first fourteen cases, one alone died, and that one of prevailing dysentery, and from whom (a lad of ten years) a stone weighing three ounces and one drachm, and measuring seven and three quarters by six inches in circumference had been removed. In another one, the rectum was punctured, but the statement is added that no solid fæces escaped; and, moreover, that this patient was dismissed well on the eleventh day.

In the very work before us now being commented on, occurs the sentence on the subject of accidents in lithotomy; another author says, I have seen the rectum wounded in three or four instances, but no serious consequence ever resulted. A wound of the bowel occurring, as it does, close to the sphincter, does not appear to Mr. Key to be a matter of serious moment. Again, nineteen years after this period—viz., in 1871, the analysis and synopsis of one hundred cases of lithotomy, lithotrity, etc, were published, in which the same operator declares his mortality by the bilateral method to have been only eight; that is, one in ten and seven-eighths, and by omitting the desperate cases, as he never yet has refused to operate when, after consultation, an operation was decided upon, the ratio of deaths would have been reduced to about one in twenty-five. Furthermore, in the first fifty cases, eight died; in the last fifty of the one hundred cases, only three proved fatal. Adding now five cases recently operated upon by this method, we have ninety-two cut bilaterally, only eight of whom died, which makes the mortality only one in eleven and a half, and not four and two-thirds, as Mr. Coulson published; nearly three times less. Surely, this is a vast and striking difference from his conclusions with respect to the writer's mortality—by the bilateral method. The value, too, of this report to the American Medical Association, is that the cases were not selected; the name of each patient, residence, age, sex, race,

date, method selected, where the operation was performed, the number, size, weight, composition of each stone extracted, etc., are all appended, and for which he has received the high compliment from Professor Frank H. Hamilton, of New York City, declaring, "I would believe his statistics before any living man."

To remove the impression that the reference to Mr. Coulson's opinion in regard to the bilateral operation is ungenerous (he residing in England, and may not, therefore, have seen the report made in this country in May, 1871), these facts are briefly appended. The Transactions of the American Medical Association reach London soon after their publication. The "London Lancet" states that the great number of successful bilateral operations in them are very striking. The "Hebdomadaire de Médicine" of Paris published them; and Dr. Gouley, Professor of Genito-Urinary Organs, Medical Department University of New York City, says these results are perhaps the best on record. Moreover, in favor of the median operation, Dr. A. G. Walter, of Pittsburg, Pa., is said to have lost only one case in sixty-four; and Sigñors De Broza and Scanzoni, of Verona, Italy, are said to have saved ninety-nine of one hundred, but in these publications no particulars, dates or classification of patients are given.

The reader will be surprised in this account of lithotomy to learn that the name of America's greatest lithotomist, Dr. Benjamin Winslow Dudley, is not even alluded to in this article; nor is this the only omission of the kind. These are not infrequent, and are so flagrant, as in the present one, as to recall the rumor of the play of Hamlet, with Hamlet left out. In the present instance, however, we can be consoled by the remark of another professional Englishman alluding to him, who is reported to have said, that notwithstanding all done in medicine, it has remained for a backwoodsman of America to teach the world how to prepare a patient for a capital operation; and this may be so, for no surgeon ever prepared more judiciously for a capital operation than did Dr. Dudley.

Having consumed so much space and time, and not to exceed

the limits assigned us, we must omit comments on several other subjects well-deserving consideration. We may not, however, perceive the propriety of introducing into a work on surgery proper, notices, and some of them pretty lengthy, of iodine, mercury, zinc, etc.; and pregnancy, pupil, etc., etc.

Mr. Gascoyen has a well-written article on necrosis deserving careful study. That on orthopœdic surgery is quite meagre, and much behind the times; but for which there may be some excuse, seeing how much of late it has become a specialty.

In Pterygium Desmarre's operation for removing this growth by separating the apex at the cornea, dissecting back towards the angle of the lids, and closing the exposed surface by fine sutures in the conjunctiva, is commended.

In the communication on affections of the rectum, no notice is made of fissures; nor is there a reference to Galt's valuable modification of the trephine; and also very little in commendation of the silver suture.

The principal defect of this edition of "Cooper's Surgical Dictionary," is the lack of freshness; it is too much behind the recent important movements of the art, and contains too little of late improvements. But as a work of reference, containing a large store of historical information, and even practical to the middle of the present century, it will long retain a classical position. P. F. E.

CHEMICAL AND PHARMACEUTICAL.

"Diruit, ædificat, mutat."—Hor.

What is Cincho-Quinine.—Cincho-quinine has been in the market some time; it is prepared only by one House, and is said by them to be a mixture of all the alkaloids of Peruvian bark. An intelligent and truthful exposure, showing this statement to be false, would, of course, brand it as a humbug. In the proceedings of the American Pharmaceutical Association

for 1874, on page 448, we have an exposure by Mr. A. E. Ebert. He says: "Our experiments determine it to be simply the alkaloid cinchonia, which has been precipitated from sulphate of cinchonia by means of an alkali or alkaline carbonate, washed and dried between cloths, with pressure, thereby producing it in the form of scales." Mr. Ebert, in the same article, refers to another exposure made by Mr. W. T. Wenzell, in 1870, who is reported as having examined it, but was unable to find anything but cinchonia. There are also several other exposures on record. On page 645 of the proceedings referred to above, we notice five others. The first one is from Professor Genth, of the University of Pennsylvania. He says: "I have tested it by the four most characteristic tests for quinine, and found decided quantities by each of them." The second is from Dr. S. P. Sharples, State Assayer of Massachusetts. He says: "I made a careful examination, and found cinchonoidine, quinidine, cinchodine, and quinine." The third is from G. A. Mariner, analytical chemist, Chicago. He says: "I tested it for quinine, and it gave the reactions very decidedly." The fourth is from James R. Blaney, analytical chemist, Chicago. He says: "I submitted it to tests for quinine, and obtained reactions of that alkaloid beyond question." The fifth is from Professor Merrick, of Boston. He says: "I found abundant evidences of the presence of quinine." We have also seen a number of other exposures, all testifying to the fact that cincho-quinine is as represented by its manufacturers.—*Pharmacal Gazette.*

NOTE.—As cincho-quinine is largely used; largely advertised; abused; eulogized; and the theme for frequent discussion, this extract will be read with satisfaction.—E. S. G.

Condensed Milk and its Manufacture.—The first idea of condensing milk appears to have been entertained by the well-known scientist, Professor Horsford, whose food products have, perhaps, given him as much reputation as his extended scientific knowledge. He first conceived the idea of reducing milk to

a powder, or to a doughy paste which should contain all the intrinsic principles of the fresh milk, and yet keep, when packed in tin, any length of time or in any climate, and be good when opened. These experiments were made as early as 1849. After many attempts, the Professor satisfied himself that by evaporation at a low temperature and the addition of cane sugar, an article could be produced which would retain the desired qualities. Gail Borden was at this time an assistent of Professor Horsford, and from some unknown, or at least unexplained reason, the Professor made over to his assistant, Borden, the result of his experiments, and the future right to use them as he pleased. One year after this curious transaction, Borden having in the meantime perfected his process, formed a company acquiring sufficient capital to push his enterprise, soon obtained a sale for his product, and laid the foundation for a colossal trade.

In 1866 a manufactory of condensed milk was founded in the town of Cham, Switzerland, and soon became known in Europe as favorably competing with the natural milk supplied to the cities. Baron Liebig also added to its authority by endorsing it. In consequence of the increasing consumption in Switzerland and Germany, several new factories were started, but none turned out as good an article or did as much business as the Cham factory. At the Vienna Exposition the product was exhibited by four competitors in the German department, three in the Swiss, as well as one in each of the English, Norwegian, and Spanish departments, but it is represented that these three latter were deficient both in color and consistency.

There are five or six manufactories of condensed milk in America, which turn out in the aggregate perhaps four times as much milk as the foreign factories. Besides that, within the last year, the trade with Germany has bid fair to take quite a quantity of the surplus manufacture off our hands. Some of our companies are doing a large business with China and Japan, where the milk is a great favorite.—*Pacific Medical and Surgical Journal.*

Vapor of Mercury.—M. Merget has discovered that by dissolving iridium, palladium, platinum, gold, or silver, in *aquæ regia*, a reägent is obtained which is extremely sensitive to mercury, and which will, he believes, prove of great value in the solution of very many practical and theoretical problems. A paper impregnated with such a solution is marked with an indelible black stain immediately it is brought in contact with mercury or mercurial vapor, no matter how small the quantity or how low the temperature may be. M. Merget also hopes to be able to throw great light upon the problem of a limited or an unlimited atmosphere, which was investigated without success by Wolloaston and Faraday. He expects to be able to prove that mercury constantly sends forth a vapor, which ascends to the height of a mile at the rate of five hundred and fifty feet per second. As a practical result of his researches, M. Merget, by means of these test-papers, exhibits the presence of mercurial vapor in all the workshops and warehouses where this metal is used or stored. If a workman passes but one hour in such an atmosphere, his clothing, face, hair, and beard become impregnated with mercury. If he but touches one of the prepared papers he testifies to the presence of the mercury by a well-defined black mark.—*Phar. Gaz.*

Kola Nut.—This product of the western coast of Africa has become well known to British botanists on account of its use among the natives as a stimulant and promoter of digestion. The "Athenæum" announces that its correspondent at Lagos has sent home to London the fruit and leaves of another kola, known as the "bitter kola," which belongs to a different botanical order—the Guttiferæ—and possesses some remarkable properties. The natives use the fruit as a remedy for coughs, and to improve the voice of singers; while the correspondent recommends it as extremely beneficial after sea-sickness, saying, "My appetite returned almost immediately after nibbling a portion of a seed I found in my valise." If he means, as we infer, that the bitter kola nut is a remedy for sea-sickness, and

not merely a restorative of appetite after that affliction has terminated itself, it is not unlikely to prove valuable in medicine. —*Pharmacal Gazette.*

The poisonous effects of hydrocyanic acid were at one time supposed to be due to the paralysis of the nerves that control the action of the heart, and atropia was suggested as an antidote. More recent investigations, however, seem to show that death is produced by asphyxia, and that artificial respiration is a better antidote than atropia.—*Ex.*

Phosphoric Acid in Ergot.—Professor Levi, of the University of Pisa, has just made known, as the result of numerous analytical and experimental researches, that the physiological, therapeutical, and obstetrical properties of ergot of rye are due to the presence of phosphoric acid, which it contains in abundance, much more than to its organic principles (like ergotin, ecbalin, etc.), to which until now had been exclusively ascribed all the various actions of the substance.—*Phil. Med. and Sur. Rep.*

MISCELLANEOUS.

"Non omnes eadem mirantur ament que."

Inversion of the Uterus of Five Years' Duration—Operation—Cure.—Dr. Kemp, of New Zealand, ("Obstetrical Journal") describes the case of a female who suffered severe floodings following the birth of a child, for five years, and whose health was greatly impaired in consequence. He found that the uterus was absent from its proper position and appeared in the vagina, in the form of a smooth, round body, continuous with the vaginal walls. Drawing down the uterus with a double loop of tape, the cervix was incised in two places, but the organ resisted the attempt to restore it. A few days afterwards, the operation was repeated, two free incisions being

made in the cervix, one in front, the other behind, when it was replaced without difficulty. No blood was lost, and a perfect cure was effected, no medicine being used except a rectal suppository of a half grain of morphia. She kept her bed for a week, and her health was subsequently restored completely. —*Exchange.*

Leucocythæmia Cured with Ergotin Hypodermically.—Professor Da Costa ("American Medical Journal") treated with success a case of this disease connected with an enlarged spleen, by injecting five grains of ergotin mixed in glycerin and water every other day for eight injections. At the same time the patient took twenty drops of tincture of iron three times a day. The improvement was so rapid that he was discharged as cured after the eighth injection. The size of the spleen diminished sensibly from day to day. The ergotin was introduced in the splenic region.

NOTE.—This article has gone the rounds of the Journals without question or comment. There is an error either in the statement or the diagnosis. Surely no one believes that a well-developed case of leucocythæmia can be cured with a little ergotin and glycerin.—E. S. G.

Spina Bifida.—Dr. Morton, referring to Mr. J. E. Burton's case of spina bifida, reported in the "British Medical Journal," says: "It belongs to a class of cases all but absolutely hopeless, in which the lower limbs and lower part of the trunk of the body are paralyzed, and the infants usually die in a few days. Instances of longer survival are rare indeed, and I am not aware that there are any on record in which the paralysis was so very extensive as in Mr. Burton's case." I have at the present time under my care a case precisely similar to the one described by Mr. Burton, and the child is now eleven weeks old. It was born on December 7, 1874, and was a healthy looking and well-made female child, down to the seat of the cleft in the spine. Over the two upper lumbar vertebræ was a fluctuating tumor about six inches in circumference, having a well-marked pedicle. The tumor had two small superficial

ulcerations, from which a thin ichorous discharge exuded, the remainder of its surface was covered by a somewhat dense opaque-looking integument. There was a talipes varus of both feet, the plantar surfaces being accurately opposed to one another, and quite flat and smooth, as if they had been kept in perfect apposition during the period of gestation. Both legs were flexed upon the abdomen, and had an arched appearance with the concavity towards the abdomen. There was no appearance of the natural fold of the buttocks or of the popliteal space. The whole length of the legs from the tuberosities of the ischia to the heels of the feet presented a smooth unbroken convex surface. There was paralysis of the sphincter ani. This state of things continues. I did not consider the case at all fitted for operative interference, and in this view my partner, Mr. Marsack, concurred. At the present time, the tumor and the lower limbs are much in the condition I have here decribed. There has been no increase in the size of the tumor, rather a diminution. The child for the first month appeared to thrive; since then, it has gradually wasted, until now it is quite a skeleton. There have been no convulsions, but it has suffered severely from eczema of the head, face, and trunk. The surface of the tumor has continued to give forth a thin and sometimes offensive discharge. This case appears to be in all respects similar to Mr. Burton's, except that my patient has no rotation outwards of the legs. I could not see any object in attempting to cure the spina bifida, as there appeared to be no prospect of relieving the distorted and paralyzed lower limbs; and I felt, as did also the parents, that the sooner the poor little deformed creature quitted this world the better. Probably the injection of iodine, as in Mr. Burton's case, would have expedited matters, but possibly it might have prolonged the child's life, which was not an issue to be desired.—*Frederick Manser, in British Med. Jour.*

An Anti-vaccinator on Vaccination.—At a recent meeting to consider the question of compulsory vaccination in Jersey,

which ended unfortunately in an adverse vote, all the argument was on one side. One of the most effective was included in a speech by the most prominent of the anti-vaccinators. He said: (1) That he had never been vaccinated himself; the upshot of which, as stated by himself, is that he has had small-pox three several times. (2) That, however, he had had all his children vaccinated; the result of which, from his own account, is that not one of them has ever had the small-pox.—*Lancet.*

The Fashionable Physician.—The London "Globe" prints the following readable article: In the full swing of medical practice, it says the pace is tremendous. When once the indefinable stamp of fashion is set upon a doctor, every one wants to engage his services. You may go to the great man's house again and again, and the great man will not be able to see you. You may write to his secretary, and the secretary may make an appointment the week after next, but it by no means follows that he will be able to keep the appointment. As soon as the clock strikes two he makes a dash from the consulting-room, swallows an apology for a lunch, and you presently see him driving past the windows. In vain the unpunctuality is notorious, in vain the consulting fee is doubled. People are determined to have the great man, and the great man they accordingly get; they will bring him down two hundred miles, though they have to pay two hundred guineas for the journey They will have him though the patient may be *in articulo mortis.* For there are circumstances under which some rich men think no consultation is too costly. They will have him and no one else, although the case, scientifically considered, may be as simple as a cut finger. Sometimes they resort to him because the case has already baffled the average skill of the average practitioner, and it not unfrequently follows that the celebrated physician makes a diagnosis, and suggests a remedy that sets his brethren to rights. On the other hand, the average practitioner has his revenge in repeating stories of extraor-

dinary blunders perpetrated by fashionable physicians. But when the fashionable physician has really obtained this immense practice, the charm of the practice must depart. The great physician becomes a great slave. He lives in a state of gilded captivity. He can not call his house his own, or his hours his own, or his family his own. He is at the beck and call of the public. He takes his meals with his loins girded; or, rather, he may be obliged to exist on Liebig's extract for want of time to partake of solid food. When the tide of fashion sets in, he is almost submerged beneath the wave. He bids farewell to leisure, friends, private life—all that makes existence endurable. The guineas accumulate, the checks, the bank notes, there are plethoric investments, a lordly income. But a man's income for all purposes of enjoyment is not what he gets, but what he spends. Many men who imagine that they are in the enjoyment of a stately income are often, like children, playing with little bits of paper that come in and little bits of paper that go out. There is not so very much use in man getting £15,000 a year if he can hardly spend £1,500. But as a rule we acquit great physicians of any mean love of filthy lucre. They hardly know the sums which roll out of their pockets when, worn out and harassed, they tumble into the uncertain bed from which the night bell may arouse them. They would willingly take less of lucre for more of leisure. This was a strong idea of the late Sir Henry Holland's. He early fixed the modest limits of his professional income at £5,000, and would allow no professional business to interfere with his three months' holiday. He had his reward in living to Nestorian age, with all the reputation of Nestor's wisdom. The fashionable physician who reciprocates the firm belief which the London public have in him with a corresponding belief in himself, is goaded on by two considerations of supreme weight. In the first place, he believes that he is conferring a great amount of good on suffering humanity which no other physician could render equally well with himself. In the next place, he believes that he is steadily enlarging the limits of medical science.

Each patient is a book, and his practice represents the library of medical knowledge; he is willing, therefore, to endure any toil, although he knows how dangerous is such toil when carried beyond the endurable limit. Such a course is especially likely if he is a believer in the boundless future medicine, in new methods of diagnosis, in new systems of therapeutics, and has the "enthusiasm of humanity" in his soul.—*Canada Lancet.*

Elephantiasis Græcorum.—Dr. Duckworth exhibited a patient, who was the subject of this affection in a severe form, as a contrast to Dr. Southey's case of anæsthetic leprosy shown at the last meeting. He was a well grown young man, aged twenty-one, and was born in Calcutta. His father was born in Bordeaux, and his mother was of French extraction, born in Madras. He was suckled by his mother. When nine years of age, he came to England, and remained in good health, with the exception of the outbreak of some brown patches upon his arms and face. When twelve years old, his feet and legs began to swell, and some anæsthetic patches occurred upon them. Tubercular growths appeared upon the legs, face and arms in succession. He now presented the leonine aspect and all the typical features of true tubercular leprosy, the face being covered with thick tubercular folds, and the lobes of the ears being greatly enlarged and thickened; numerous tubercular patches, some of which were softening, occurred over the wrists, arms, legs, and feet. The ulnar and the right peroneal nerves were enlarged. There had been albuminuria for the last two years. The case had been fully reported by Dr. Liveing in the Gulstonian Lectures for 1873, also by Dr. Duckworth in the tenth volume of "St. Bartholomew's Hospital Report." The man was for some time in Guy's Hospital under Dr. Habershon, and in the Glasgow Royal Infirmary under Dr. McCall Anderson. He was probably the first patient who in this country had been treated with Gurgun balsam, both as an outward application in the form of a lotion, and taken internally with lime water. The tubercles seemed to break down

more readily under the drug, but the remedy could not be regarded as a specific, as Dr. Gubler had affirmed it to be. Steel and a good dietary appeared to produce the most improvement. The patient had gained in weight during his five months' stay in St. Bartholomew's. He passed on an average one-third less than the normal amount of urea daily. No renal casts were at any time found in the urine.—*Brit. Med. Jour.*

Constitution of the Brain.—M. Gobley has recently completed extended investigations on the above subject, with the following results: The human cerebral substance contains about 80 per cent. of water. Two albuminoid matters are present—one not differing from albumen, and soluble in water; the other is insoluable, and for this the investigator proposes the name of "cephaline." The fatty substance of the brain is formed principally of cholesterin, lecithin, and cerebrin, and also olein and margarin. The organ contains certain salts—some soluble in water and in alcohol, others soluble in water and not in alcohol. During decomposition the cerebral pulp furnishes acid product, among which are oleic, margaric, phospho-glyceric, and phosphoric acids.—*Ex.*

A Lady-Dentist.—The following interesting account of a lady-dentist at Berlin appears in "Women and Work:" "It appears that the lady in question (whose name I unfortunately forget) was born in Schleswig, and married a dentist, who settled in Berlin. This man, after leading her for years a wretched life, died at last of intemperance, and left her without means of subsistence. Having often watched her husband at his profession, she fancied that she possessed sufficient nerve and dexterity to practice it, too, and resolved to become a dentist herself. But here was the difficulty—the law forbade any one to practice dentistry without a certificate, which could be gained only by examination, and there was no examination for women. She was sadly puzzled; but, being informed (erroneously, as it proved) she should obtain a certificate by attending

lectures and dissecting practice in America, after repeated applications to the professional authorities of Berlin, she was told by them that an American certificate would be accepted. She at once resolved to go to America, but on arriving at Philadelphia, where her informant had given her to understand she could study without difficulty, on applying at the College of Dentistry in that place, she learned, to her surprise and disappointment, that no woman had ever applied before, and that no exception could be made in her favor. Her case, however, created much interest among the authorities, and was formally discussed there, and the result was, that the desired permission was granted her; one vote decided the question. She now set joyfully to work, attended all the required lectures with seventy young men, and worked with them in the laboratory. One of the professors kindly gave her private instructions, and she went through a private course of dissection. She succeeded in the examination, and began to practice in Philadelphia with such success that she was strongly recommended by her friends to remain there. She wished, however, to return to Berlin; and, accordingly, armed with her certificate, did return. She began the practice of dentistry in that city, confining her practice to women and children. She met at first with much apposition from her fellow-practitioners; but ultimately made head against it, especially after she had been introduced to the Crown Princess, and had been appointed dentist to her Royal Highness' children. Engagements among the highest families in Berlin now flocked upon her, and at the present moment she stands in the first rank of her Profession. She is said to have great strength in her little hand, a flow of health and spirits, and works without weariness ten hours a day. In the evening her saloon is the resort of the most intelligent and fashionable society in Berlin.—*Brit. Med. Jour.*

PROCEEDINGS OF SOCIETIES.

"Etsi non prosunt singula, juncta juvant."

Alabama State Medical Association.

The Medical Association of the State of Alabama met at 12 M., yesterday, April 19th, at Montgomery, Alabama, in the new city building, Dr. J. S. Weatherly in the chair, Dr. B. H. Riggs, Secretary, and Dr. W. C. Jackson, Treasurer.

"The rooms had been appropriately arranged for the occasion, and the anatomy of the human kind was profuse on the walls."

At the opening of the meeting, prayer was offered by Rev. Dr. Stringfellow, Rector of St. John's Episcopal Church of this city.

Dr. Jackson, of the Committee of Arrangements, on the part of the local profession, then delivered the address of welcome.

A motion was made and carried that the address of the President of the Association should be delivered at the United States Court-room to-night (Tuesday), at 8 P. M., in consequence of the absence of the Orator of the Association, Dr. Summers.

Dr. Weatherly, President of the Association, supplemented the remarks of welcome of Dr. Jackson, and deferred any further remarks until to-night, except to crave indulgence of the Association, as their presiding officer.

On motion of Dr. Michel, Drs. Griggs and Kendrick, of the State Medical Association of Georgia, were invited to seats on the floor, and were introduced to the Body by the President.

Dr. Riggs, Secretary, then read a very interesting report:

"I must say that no chairman was ever more efficiently and agreeably aided than I was by my two confreres of the Publishing Committee. In fact, the Association largely owes the exceedingly creditable appearance of the volume of Transactions of 1874 to the zeal and fidelity of her sons, Drs. J. B.

Gaston and R. F. Michel, aided by our President, Dr. J. S. Weatherly; for these gentlemen attended to the correcting of the proofs, superintended the printing as it went through the press, and afterwards attended to the mailing. The Association owes them a debt of thanks; they certainly have mine."—*Ext.*

We printed 300 copies of 426 pages each at the moderate cost of $572.70. They were sent to their destinations by express on account of their size and value.

Two copies were sent to every counsellor; one to every member of county societies who had paid the annual fee of one dollar; one copy to the secretary of every State Association whose address I had; one to every important Board of Health; one to every reputable medical journal, and one to the Secretary of the American Medical Association, the Secretary of the Smithsonian Institute, the Surgeon-General of the United States, and the Supervising Surgeon of the United States Marine Hospital Service.

With this liberal distribution and the demand thus created, the unusually large number of copies was soon exhausted.

I may be permitted to say, if the printed volume of proceedings of the Medical Associations be, as it certainly is, an index of professional zeal, scholastic attainments, and professional acquirements, your last volume will give you individually and collectively a high position abroad. It has certainly received at the hands of critics of ability and discrimination, both in our ablest medical periodicals and in private letters to your Secretary, most handsome commendation and unstinted praise. May we, in the future, sustain the reputation thus attained.

Respectfully submitted, BENJ. HOGAN RIGGS, M. D.,
Sec. M. A. S. A.

Dr. Jackson, Treasurer, then presented his annual report, which was adopted.

Letters were read from distinguished members of societies in the States of Virginia, Tennessee, Mississippi, District of Columbia, and others.

On motion of Dr. Ketchum, the Secretary was instructed to

convey by telegraph to the South Carolina Medical Society, now in session, the fraternal regards of this Body.

Health and mortuary statistics for the past twelve months of the various Societies represented, were then reported, and ordered filed.

Dr. Ketchum, who was appointed at the last meeting to deliver an essay, asked indulgence until the next regular meeting.

Dr. Michel moved that Dr. Ketchum deliver an address to-morrow (Wednesday) night, which was so ordered.

Drs. Cochran, Gaines, Michel, and Osborn, who were appointed at the last meeting to prepare essays, asked indulgence until this afternoon's or to-morrow's session.

The Association then took a recess until 3 P. M.

At the afternoon session, Dr. Gaines, of Mobile, delivered an address on the subject of Tuberculosis. The paper on this subject was prepared in accordance with the request of the Association, made at its last session.

Night Session.

Dr. J. S. Weatherly, President of the Association, delivered the annual address. His subject was the recent Act of the Legislature making the Association the State Board of Health, and the consequent duties which this Act imposed upon the Association. He elaborated the importance of the duties, and showed that it was within the power of the Association, by proper action, to greatly benefit the State by reducing, if not destroying, the fatal effects of all preventable diseases, such as cholera, small-pox, etc.—(No further report received.—Ed.)

Meeting of the Tennessee State Medical Society.

The State Medical Society met in the Senate chamber at the capital, at 11 A. M., April 6, with Dr. James B. Murfree, of Murfreesboro, President of the Society, in the Chair. After prayer by Dr. J. B. Lindsley, the roll was called.

Dr. Bowling presented and had read, by Dr. J. D. Plunket,

the Secretary, a telegram of greeting from the Kentucky Medical Society.

A lengthy and interesting address was delivered by the President of the Society.

The Association then took a recess until 2:30 P. M.

FINANCIAL.

The Treasurer presented a report showing that the finances of the Society are in a very satisfactory condition.

ESSAYS AND ESSAYISTS.

The President announced the appointment of Drs. W. P. Jones, J. J. Abernathy and Thomas Lipscomb a committee to select subjects for essays and essayists. Said essays to be read at the next meeting of the Association.

HISTORY OF THE SOCIETY.

Dr. J. B. Lindsley, the historian of the Society, was granted further time for the completion of his History of Medicine and Surgery in Tennessee.

TO BE PUBLISHED.

Dr. Abernathy offered a resolution providing for a publication in pamphlet form of the proceedings of the Society, three copies of the same to be sent to each member of the Society by the Secretary. Adopted.

ELECTION OF OFFICERS.

The election of officers of the Society being next in order, Drs. Cheatham and Van S. Lindsley were appointed tellers, and the balloting resulted in the following named: President, Dr. J. H. VanDumen, of Chattanooga. Vice-Presidents, East Tennessee, Dr. P. D. Simms, of Chattanooga; Middle Tennessee, Dr. J. J. Abernathy, of Pulaski; West Tennessee, Dr. P. F. Evans, of Union City. Secretary and Treasurer, Dr. J. D. Plunket, of Nashville. Corresponding Secretary, E. M. Wight, of Chattanooga.

STATE BOARD OF HEALTH.

Dr. J. J. Abernathy offered the following:

"*Resolved*, That the chairman, Dr. E. M. Wight, be requested to write carefully the report of the Committee on a State Board of Health for the proposed report of proceedings of the Society, and that the committee be continued." Adopted.

DR. MURFREE'S ADDRESS.

Dr. Paul F. Eve offered the following:

"*Resolved*, That the thanks of this Association be tendered our retiring President, Dr. Murfree, for his very interesting address delivered this morning, and we request a copy of the same for publication." Adopted.

"DISREPUTABLE PRACTICES."

It being reported that one Dr. Smith, of Edgefield, a member of the Society, had forsaken allopathy and taken up the practice of homœopathy, it was moved that "the name of Mr. —— Smith, of Edgefield, together with all who had adopted similar disreputable practices, be dropped from the rolls," which motion was agreed to.

THE NEXT MEETING.

It was agreed that when the Society adjourns, it adjourn to meet in Nashville the first Tuesday in April, 1876.

AN ESSAY

On the subject "Hour-Glass Contraction of the Uterus," was read by Dr. Menees.

The Society then adjourned.

SOUTH CAROLINA MEDICAL ASSOCIATION.

The Twenty-fifth Annual Meeting of the Association was held in the library rooms of the Roper Hospital, Charleston, April 13th, and was called to order by the President, Dr. James McIntosh, of Newberry.

The President of the Association delivered an able annual address on the use of hypodermic injections of the extract of ergot in uterine and other hæmorrhages. The address was referred to the Publication Committee.

Dr. J. F. M. Geddings, chairman of the Committee appointed at the last annual session to report on "Bright's Disease,"

requested, in consequence of the length of the paper, to be allowed to read only an abstract, which was granted. The paper in entirety was ordered to be published.

The report of the Committee on Puerperal Convulsions was read by the chairman, Dr. J. Ford Prioleau; and was referred to the Publication Committee.

After an animated discussion, the Association then adjourned to meet again on Wednesday at the appointed hour.

SECOND DAY'S PROCEEDINGS—MORNING SESSION.

The Association met at the usual hour, President McIntosh in the chair. A number of additional delegates were reported by the Committee on Credentials.

Dr. S. Baruch, of Camden, read an interesting paper on the Excision of the Entire Upper Jaw for Fibroma; also a paper on Acute Articular Rheumatism, with Heart Complications Treated Successfully by Cold Water Baths. The papers elicted a spirited debate, which was participated in by Drs. Gibbes, Michel, T. G. Simmons and Prioleau. The author was thanked for the papers, and they were referred to the Committee on Publication.

Dr. F. L. Parker presented an apparatus for preventing contraction of cicatrices after burns, and showed a case in which he had successfully applied it.

Dr. A. H. Moore read a paper on the Essential Nature and Causes of Meningitis Spinalis, which was discussed by Drs. Michel and Baruch, and referred to the Committee on Publication.

A telegram was received from the Alabama Medical Association, in session at Montgomery, conveying "kind and fraternal feelings for bodies assembled for like high purposes." The Secretary of the Association was instructed to answer it.

Dr. Michel exhibited a case of Hemiplegia with Ptosis of the Left Eyelid and Mydriosis. Dr. Kinloch read an interesting report on Intra-Uterine Elastic Spring Stem Pessaries, and the Indications for their Use. This paper excited deep interest, and caused an eloquent and learned debate, after which

the author was thanked, and the paper referred to the Publication Committee.

Dr. J. Ford Prioleau exhibited a modified pessary, and explained the class of cases to which it was adapted. A prolonged debate ensued, participated in by Drs. Baruch, Gibbes, Kinloch and others.

Dr. E. B. Turnipseed exhibited a number of instruments invented by him for operating on vesico-vaginal fistulæ, staphyloraphy, and explained their use. The inventor was requested to report particular results at the next annual meeting.

Dr. Baruch was requested to act as chairman of the Committee to be appointed to prepare a paper on Traumatic Tetanus, and to report at the next annual meeting.

Dr. Taylor stated that he would be glad to show the case exhibited by him before the session of laryngeal tumor, and gave a synopsis of his treatment, and of his successful operation of laryngo-tracheotomy for partial relief. Dr. Taylor was requested to frame a report of the case to be read at the next annual session.

Dr. Baruch brought forward the case operated on by Dr. J. T. Darby, of Columbia,—viz., Traumatic Epilepsy with Operation for Relief, reported in last yearly tranactions, and stated that he had but three attacks of convulsions since the operation.

The President announced the Committee on Nomination of Officers for the ensuing year, and delegates to the American Medical Association. The Association adjourned.

EVENING SESSION.

The Association reassembled at 8 o'clock. Dr. T. G. Simons moved that contributors be allowed twenty copies of their articles free of cost; and if more be desired, then at cost. Adopted.

Dr. I. W. Angel exhibited a specimen of Rupture of the Uterus and an account of the autopsy. This produced an interesting debate between Drs. Prioleau, Baruch, Michel, Wiley and Buist.

Dr. F. Peyre Porcher read a paper on the Open Dressing of Wounds.

Dr. Wiley gave an account of a case of strychnine poisoning and Atropia in Threatened Abortion.

Dr. J. F. M. Geddings' amendment to the constitution providing for the appointment of a State Board of Medicine and Hygiene was adopted, and Drs. Geddings, Taylor, Turnipseed, Spann, Manning, Simons and Pearce were appointed to constitute the Board.

The following are the officers for the ensuing year: First Vice-President, Dr. J. F. M. Geddings, of Charleston; Second Vice-President, Dr. E. B. Turnipseed, of Richland; Third Vice-President, Dr. L. H. Wright, of Barnwell; Recording Secretary, Dr. H. D. Fraser, of Charleston; Corresponding Secretary, Dr. J. S. Buist, of Charleston; Treasurer, Dr. T. Grange Simons, of Charleston.

The following delegates were appointed to attend the meeting of the American Medical Association at Louisville, Ky., in May next: Dr. J. T. Pearce, alternate Dr. B. W. Taylor; Dr. S. Baruch, alternate Dr. S. G. Croft; Dr. W. H. Geddings, alternate Dr. A. N. Talley; Dr. M. C. Parker, alternate Dr. Samuel N. McJunkin; Dr. J. Ford Prioleau, alternate Dr. J. C. Maxwell; Dr. T. G. Simons, alternate Dr. I. W. Angel; Dr. M. G. Salley, alternate Dr. S. S. Marshall; Dr. F. P. Porcher, alternate Dr. J. C. Spann; Dr. E. B. Turnipseed, alternate Dr. R. L. Cordie.

The Association then adjourned.

The Kentucky State Medical Society.

The pages of this Journal have been "kept open" and the issue of the work delayed, while waiting for the Proceedings of the late meeting of the State Medical Society at Henderson. The excellent and most efficient Secretary (Dr. J. A. Larrabee), who has just retired, very courteously offered to procure the minutes of the meeting from the present Secretary; but either

his application did not reach its destination, or the receiver of it has a practical appreciation of Dickens' great chapter, "How not to do It."

For the first time since this Journal was brought to Kentucky, the May issue is published without a full report of the Proceedings of the State Medical Society. With this explanation, just to all parties, the following brief summary is published: The Society met at Henderson, Ky., Tuesday, April 6th. The entertainments, public and private, were unusually handsome and munificent. "The ladies God bless them," the old sentiment, is ardently on every lip; and if not given and responded to at the banquet, it has been given to a larger audience, with grateful and profound appreciation. The Profession of the county surpassed all of their brethren elsewhere in the bountiful and elegant provision made for the entertainment of the Society, and the meeting was a great success. The Society meets next year at Hopkinsville, where every effort will be made to eclipse the Henderson record. The officers elected are as follows: Dr. Hodge, of Henderson, President; Dr. T. Anderson, of Louisville, Vice-President; Dr. O. Newland, of Hopkinsville; Second Vice-President; Dr. J. W. Singleton, of Paducah, Secretary.

MEDICAL NEWS.

'Nulla dies sine linea."

The attention asked in this Journal and the "American Medical Weekly" to the rank vice of newspaper charlatanism has induced many letters and several similar appeals from the Medical Press. In Evansville, Ind., the matter has secured Society action; so also has it secured prompt and marked notice from the Central Medical Association of Kentucky. Resolutions relative to newspaper charlatanism among physicians should be passed by every Medical Society.———The laws requiring those seeking to practice medicine in Kentucky to have a di-

ploma, or a certificate of some County Medical Examining Board are almost wholly inoperative. In some counties nothing has been done; in some very little; in some worse than nothing; in a few most excellent and honest work. As a whole, the law has been a failure. As in Texas, Arkansas, Missouri, Indiana and some other States, some of the Boards are incompetent; without energy; force, or reliability. In some States, incompetent men, personally unfit and professionally grossly ignorant, have been "turned loose" upon unsuspicious and helpless communities. If these evils continue, this law will become a nuisance, deserving the attention of the grand jury.——— *Medicine in the Stable*—A well-known young physician being in attendance upon the wife of a hack-driver, and being of sentimental tendencies, said, as he viewed the depressing surroundings: "Ah, Tom, sorrow has come home and left her traces!" Imagine his surprise and discomfiture, when the practical husband ingenuously and simply replied: "Indeed, sir; and what did she do with the rest of her harness?"———Dr. John Bull, of sarsaparilla notoriety, died in Louisville, Ky., April 26th. He acquired a large fortune by the sale of his different preparations, and used this liberally as a good citizen and a good man. His preparations attracted much attention, and even received the testimonials of misguided and simple physicians. He was buried with much display, and with deserved manifestations of sympathy and regret.

Medical Law of Nevada.—At the recent session of the Legislature of the State of Nevada, an Act was passed, of which a true copy is subjoined, and which took effect on the 28th of March last. To Dr. Bergstein, formerly of San Francisco, a graduate of the Medical College of the Pacific, who was a member of the Legislature, is mainly due the credit of its enactment.

The People of the State of Nevada, represented in Senate and Assembly, do enact as follows:

SECTION 1. No person shall practice medicine or surgery in this State who has not received a medical education and a

diploma from some regularly chartered medical school; said school to have a *bona fide* existence at the time when said diploma was granted.

SEC. 2. Every physician or surgeon, when about to take up his residence in this State, or who now resides here, shall file for record with the County Recorder of the county in which he is about to practice his profession, or where he now practices it, a copy of his diploma, at the same time exhibiting the original, or a certificate from the Dean of the medical school of which he is a graduate, certifying to his graduation.

SEC. 3. Every physician or surgeon, when filing a copy of his diploma or certificate of graduation, as required by section 2 of this Act, shall be identified as the person named in the papers about to be filed, either by the affidavit of two citizens of the county, or by his affidavit taken before a notary public or commissioner of deeds for this State, which affidavit shall be filed in the office of the County Recorder.

SEC. 4. Any person practicing medicine or surgery in this State without complying with sections 1, 2 and 3, of this Act, shall be guilty of a misdemeanor; and, upon conviction, shall be punished by a fine of not less than fifty ($50) dollars, nor more than five hundred ($500) dollars, or by imprisonment in the county jail for a period of not less than thirty (30) days, nor more than six (6) months, or by both fine and imprisonment, for each and every offense; and any person filing, or attempting to file, as his own, the diploma or certificate of graduation of another, or a forced affidavit of identification, shall be guilty of a felony; and, upon conviction, shall be subject to such fine and imprisonment as is made and provided by the statutes of this State for said offense.

SEC. 5. It shall be the duty of the police, sheriff, or constable, to arrest all persons practicing medicine or surgery in this State who have not complied with the provisions of this Act; and the officer making the arrest shall be entitled to one-half of the fine collected.

SEC. 6. No portion of this Act shall apply to any person who,

in an emergency, may prescribe or give advice in medicine or surgery in a township where no physician or surgeon resides, or when no physician or surgeon resides within convenient distance, nor to those who have practiced medicine or surgery in this State for a period of ten years next preceding the passage of this Act, nor to persons prescribing in their own family.

SEC. 7. This Act shall go into force sixty (60) days after its final passage.—*Pacific Med. and Surg. Jour.*

Superintendent of Health for Wilmington.—The Legislature of North Carolina has created the above office. The duties of the incumbent (not yet appointed) will be to give medical attention to the city prisoners, to such out-door poor as the Mayor may direct, and particularly to those with contagious diseases. In case of the outbreak of infectious diseases after a vessel has passed quarantine inspection, he shall have power to return the vessel to quarantine at the mouth of Cape Fear river. He is also to keep on hand good vaccine matter, and to vaccinate the poor of the city. He has nothing to do with the mortuary reports nor the sanitary condition of the city, further than above detailed. Salary $100 per month.— *Va. Med Monthly.*——— *Appointment and Honor.*—Dr. Gervis has been appointed Obstetric Physician to and Lecturer on Midwifery at St. Thomas' Hospital, succeeding Dr. Barnes. Professor Andral, the eminent pathologist, has reäppeared in scientific circles, and resumed investigations. His retirement was due to the illness of a near relative, to whom he has devoted all his energies for several years.—*N. Y. Medical Journal.*———*New York State Inebriate Asylum.*—Drs. John J. Orton, of Binghamton, and William C. Wey, of Elmira, and Benjamin F. Bruce, of Lenox, have been appointed by the Legislature to be managers of the State Inebriate Asylum at Binghamton.—*Ib.*———Dr. John Lizars Lizars, M. R. C. S., of the Faculty of the Toronto University, died in Toronto, March 6th, aged forty-two years. He was a nephew of the celebrated surgeon of the same name, of Edinburgh.—*Ib.*——Dr. D. W. Cheever has been appointed Professor of Clinical Surgery in the Faculty of Medicine at

Harvard University.———The name of "Vater Rokitansky," as the Vienna journals now call the aged professor, appears in its accustomed place as professor of morbid anatomy in the University of Vienna for the Spring semester. This venerable pathologist, being in very fair health, seems loath to give up his usual occupation, simply because of having reached and passed the allotted time of man. No doubt, too, he is amused at the spirited strife now going on with reference to the appointment of his successor, and his announcement that, health permitting, he will continue throughout the next winter, seems to strike consternation amongst the numerous applicants for his chair. No doubt the old gentleman enjoys and wishes to prolong the wrangling of the medical politicans.———*The New York Diet Kitchen.*—At the recent annual meeting of this charity, at 374 Second Avenue, Mrs. William C. Whitney, Secretary of the Association, read her report, in which she stated that thirty patients were provided with properly-prepared food daily. The Board of Apportionment had allowed the kitchen $700, which had been applied to the equipment of another kitchen at No. 438 West-Thirty sixth street. The design of the managers is to extend the system, so as to have a diet kitchen in every dispensary district, as at first suggested by Dr. C. H. Atwater. The report of the Treasurer, Mrs. W. Langdon Ward, showed a balance on hand of $1,843.82, the total receipts having been $3,364.41.—*Med. Record.*———Dr. Horace Dobell was lately the recipient of a vote of thanks, handsomely illuminated on vellum, on his retirement from the post of Physician to the Royal Hospital for the Diseases of the Chest, after sixteen years of service. He has also been elected consulting physician to the hospital.—*Ex.*———*University of Pennsylvania.*—At the last meeting of the Trustees of this Institution, Dr. James Tyson was elected Professor of Pathology, Dr. Louis A. Duhring, Professor of Diseases of the Skin, and Dr. H. C. Wood, Professor of the Diseases of the Nervous System in the University Hospital.—*Ex.*———*Resection of the Scapula.*—Dr. Vuzengo Omboni, a surgeon in Bozzolo, reports

("Raccoglitore Medico) the complete removal of the scapula for a medullary osteo-sarcoma. The patient recovered. The doctor claims that his case is the fourth in which this bone has been removed in Italy.

EDITORIAL.

"Nullius addictus jurare in verba magistri."—Hor.

THE STATE AND THE PHYSICIAN.—It is very gratifying to see how steadily increases the interest of the State in medicine. Very many of the States have passed laws directly concerning the physician; the law regulating the registration of births, marriages and deaths; the pharmacy law, making it a penal offense for any other than an educated pharmaceutist to dispense the prescriptions of physicians; the anatomical law, allowing increased privileges for securing material for dissection; the law creating Boards of Health, with powers of quarantine; the licensing laws, giving the right of practicing medicine either to medical graduates, or to those who have passed an examination before County Boards of Examination.

Surely, the day has passed when it can be justly complained that the physician receives neither a hearing nor justice in American legislation. It is true that the attention given is not as thorough as is desired; and, as the logical results of this, it is true, that the laws enacted are not such as may be regarded to be the sentiment and demands of the Profession; yet, with these palpable and admitted objections, it can not be denied, that the physician is yearly becoming more consulted and more respected in the legislation of this country.

It behooves the Profession then to read carefully all the laws that are enacted; to mark the errors, both of omission and commission, and to correct these for the benefit either of those making original laws in this connection, of those who seek to have old

laws amended. And among the many useful duties that may be committed to Medical Societies, and be accepted by them, none are more important than the origination, development, and perfection of all such laws as are needed or demanded of legislators, by the Medical Profession. Certainly, if there is any one method better than all others, for obtaining laws efficient and unobjectionable, it is the discussion in Medical Societies of the subjects to be embodied in these laws, and securing thus the true wish of the Profession. This has never been done. Is it not good administration to have in each Medical Society a regular committee, to whom all such questions may be referred; and who, in the absence of any referred questions, shall, at stated periods, present for discussion and action the cardinal subjects which physicians desire embodied in the laws having special reference to medicine? The usual method of having such laws drawn up by one member, and then, by courtesy, adopted, with all their deficiencies, is so bad, that the mere statement of it is sufficient to secure its condemnation. It is true that very many indeed will say, that they do not wish to discuss such subjects, or to hear them discussed; that they seek "science," etc., etc.; but this is mere forensic moonshine; often used by those who do not or can not engage in a debate on questions of pure science; and who, when laws laboriously arranged by others are enacted, evince the most marvellous alacrity in seeking to profit by them. Surely, every one in the Profession desires to see created all of those laws which are regarded by physicians as conducive to the benefit of humanity, to the welfare of medicine, and to the advantage of its representatives. The first necessity, then, is to have good laws proposed; and the best method of securing this result is by comparison of relative views in Societies; by full inquiry as to the essentials for these laws; and then through the influence of the Profession obtain their enactment.

It will be seen in this Journal (p. 586) that Nevada has recently enacted an important law, but that, as in most other States, the Legislature has not fully provided for making this law

efficient. In most of the States, the law similar in intention is almost "a dead letter." Men wholly unprepared "practice medicine" to their hearts' content, if not to the content of their pockets and their patients, and yet "there is no one to make them afraid." They transgress the law with impunity.

Every such law, after making the offense described penal, should make it a penal offense if the legal authorities provided for in the law do not secure the arrest and punishment of the transgressors. Without such a law, the way of the transgressor becomes not hard, but very easy indeed; so easy that they are the most numerous, the most contented, the most defiant, and the most incorrigible culprits in many States. If in some counties they are foolishly frightened into presenting themselves before the Medical Boards of Examination provided by the law, there is, as a rule, an interchange of bows and courtesies, of dignity and decorum; an imposing printed blank is then signed, sealed and delivered, and then the renegade medical "Ephraim is joined to his idols;" and the State says, "let him alone." There are, of course, some conspicuous and most commendable exceptions to this rule; very conspicuous and commendable; but these highly honorable observances of the spirit of the law are not due to its rigid tenor, but to the high character of its medical custodians.

So it is with all of the different laws enacted under the advice of the Profession; they are defective invariably; errors of omission and commission in them are everywhere apparent.

Medical Societies must take these questions into consideration; must discuss them, and then give to legislation a medical code of laws (for each State) beneficial to humanity, and honorable in all respects to medicine. So will mankind more and more appreciate the great value of that important connection described in the caption of this article; the State and the Physician.

RICHMOND AND LOUISVILLE

MEDICAL JOURNAL.

VOL. XIX. JUNE, 1875. No. 6.

ORIGINAL COMMUNICATIONS.

"Qui docet discit."

ART. I.—GELSEMINUM SEMPERVIRENS—AN INQUIRY INTO ITS PHYSIOLOGICAL ACTION BY MEANS OF EXPERIMENTS AND VIVISECTIONS—AN INAUGURAL THESIS. By R. N. TAYLOR, M. D., of Kentucky.*

Gelseminum sempervirens, known also as the yellow or Carolina jasmine and woodbine, is a beautiful climbing plant, growing in rich, moist soils along the southern sea-board of the United States. The yellow jasmine, which, in reality, is not a true jasmine, has been confounded with the jasminum officinale. This mistake has arisen from the fact that the generic name gelseminum, applied to the former, was one of the names by which the true jasmine was known to the ancients. The jasminum officinale, or true jasmine, was known to the ancients and used by them as far back as the time of Dioscorides; whereas, the medicinal virtues of gelseminum sempervirens are of comparatively recent discovery. The true jasmine is a native of Southern Europe, while the yellow jasmine is found only on the southern coast of the United States, as mentioned above.

Although gelseminum has long been employed throughout

* The preparations of the drug used in these experiments were made for me by Mr. C. Lewis Diehl, a distinguished pharmaceutist of Louisville, Ky.

the Southern States as a domestic remedy for worms, its still more powerful action upon the system was accidentally discovered in the year 1850, through the mistake of a servant, who, being directed to procure a particular root, which was to be used in an attack of bilious fever, prepared instead the root of the yellow jasmine, the administration of which was followed by prostration and great muscular debility, as well as the complete disappearance of all the fever symptoms.

The drug then passed into the hands of the "Eclectics," and was employed by irregular practitioners several years before its virtues became known to the Profession.

The root is the part of the plant which is used in pharmacy. As found in the shops, it is in cylindrical or split pieces about an inch in length, of a yellowish-white color, and a bitter taste. According to the latest and best analysis, it contains gum, starch, albumen, coloring matter, gallic, and pectic acids, salts of potassa, lime, iron, magnesia, and silica, gelsiminic acid (a new organic acid), and an alkaloid called gelseminia or gelsemia, which is the supposed active principle of the drug; hence its name.

Both the acid and the alkaloid have been isolated, and may be obtained either from the root itself, or from the fluid extract, by a process, into the description of which the scope of this paper does not allow me to enter, my principal object being rather to investigate the physiological action of the drug. But an inquiry into the chemical and physical properties of the two most important constituents of the drug, to which are due its medicinal powers, is not out of place here.

Gelseminic acid is an odorless, colorless, and nearly tasteless solid, which crystallizes in groups of delicate needles. It is strongly acid, uniting with bases to form salts, which are nearly insoluble in water. The acid itself is soluble in chloroform, ether, and hot water, and in 1000 parts of cold water. If treated with nitric acid, it gives a red solution, which, upon the addition of ammonia, becomes a blood-red color. Caustic potash, soda, or ammonia, added to the acid, quickly dissolves

it, producing an intense yellow color. From solutions of the acid, acetate of lead throws down a yellow, sulphate of copper a brownish red, and sulphate of iron a black precipitate.

The acid exists in the root in the proportion of 1 part to 3,360. Gelseminia may be obtained from the same preparation from which the acid has been extracted. It is an odorless, colorless, and amorphous solid, with a persistently bitter taste, having decidedly basic properties, uniting with the most powerful acids to form salts, which are readily soluble in water; the alkaloid itself being but feebly so, requiring several hundred times its own weight of water to dissolve it. Nitric acid dissolves it, producing a greenish-yellow solution. When treated with sulphuric acid, it gives a red, and with hydrochloric acid, a faint yellow solution. From solutions of the salts of gelseminia, potash throws down a white, and iodine, in solution of iodide of potassium, a brown precipitate. The alkaloid exists in the root in the proportion of 1 part to 1200.

As statements and conclusions are of but little value, unless accompanied by the facts upon which they are based, I beg leave to offer the following series of experiments, instituted for the purpose of studying the physiological action of gelseminum. The fluid extract used in these experiments was a freshly prepared article, an ounce representing 480 grains of the root.

Experiment No. 1.—When blood corpuscles, in the field of the microscope, were treated with a concentrated infusion of gelseminum, no change either in their color, size, or shape was perceptible. Their behavior in the presence of the infusion was the same as in the absence of it.

Experiment No. 2.—When fresh blood was treated with a concentrated infusion, it did not differ in its behavior from that of another specimen to which none of the infusion was added; coägulation occurring in both specimens after the lapse of the same period of time.

Experiment No. 3.—Two portions of fresh liver substance—one from the liver of a dog, the other from the liver of a rabbit—were placed in an infusion of gelseminum, 1 fl. ounce =

480 grains, the vessel in which they were contained being kept in a warm room. At the end of thirty days both pieces of liver were examined and found to be in a perfect state of preservation.

Experiment No. 4.—A common gold fish—cyprinus auratus—was placed in a weak infusion of gelseminum. The first effect produced upon the fish was what seemed to be a clonic spasm or convulsion, the fish swimming around in the vessel very actively, jerking its tail, turning over several times, and almost springing from the liquid. This condition was but transient, it soon became calm, the only effect observable being the laborious respiration. The mouth and gills worked almost incessantly. The strength of the infusion was then increased, and this was repeated several times, after which the respiration became very rapid, gasping and spasmodic in character. The movements of the animal—at first active and vigorous—now became very sluggish and feeble. It lay upon its left side at the bottom of the vessel; and in whatever position it was placed, even if brought to the top of the liquid, it swam about a few seconds, and would then turn and float upon its left side. This, perhaps, was due to some peculiar condition of the nervous system. It continued in this state for three hours. The strength of the infusion was again slightly increased. In a few minutes, although not yet dead, it lost the power of voluntary motion, remaining in any position in which it was placed; but reflex action still persisted; the pricking with a needle of any part of its body causing the animal to move. It did not die until eight hours had elapsed from the time it was first placed in the infusion. After it had been dead for several minutes, reflex action still remained, as proven by the fact that the body moved when pricked with a needle. The heart was the only viscus examined after death. This organ was dilated and distended with blood.

Experiment No. 5.—A second specimen of the same fish—cyprinus auratus—was placed in a quarter of an ounce (120 grains) of the infusion, the strength of which was not equal by

one-half to that of the infusion used in the preceding experiment. In this instance there were no effects produced, except, perhaps, at first a slight increase of the frequency of respiration. This, however, soon passed off, and the animal lived in this infusion seventy hours, dying at the expiration of that time.

Experiment No 6.—In a young cat the thorax was opened, exposing the heart, and into the right ventricle eight minims of the fluid extract of gelseminum were thrown. Of course, in this case, before the medicine could affect the general system, it had to make the transit of the pulmonary capillaries, which it did, and in a few seconds its effects were manifested. The animal had two convulsions, one following the other in quick succession, after which voluntary muscular movement ceased, the respiration becoming very slow, not more than six to the minute, irregular, spasmodic and gasping. The pupils dilated and the heart became much slower in its action, beating irregularly and more feebly with each successive stroke; and at the expiration of eight minutes from the time of giving the injection, respiration ceased, the heart continuing to beat about one minute longer.

Autopsy.—The lungs were white and bloodless, and on cutting into their tissue, it was found to be pale and anæmic. The heart was dilated, and all the cavities were filled with blood. The pericardial sac was filled with a blood-clot, which formed a cast of this cavity. The origin of this clot was no doubt the blood which flowed from the heart through the puncture of the hypodermic needle. The hepatic parenchyma was bloodless, the incisions into it showing no blood in its tissues or capillaries. The coats of the stomach were equally pale and bloodless, with all the other organs, although this viscus was filled with material undergoing the process of digestion. The kidneys were not so anæmic and pale as the other organs; the incisions into this gland showing a small amount of blood in its parenchyma. The bladder was filled with urine; the cerebrum, the cerebellum, and cord were pale

and bloodless; no puncta being visible in the incisions made into these organs.

Experiment No. 7.—To a large, healthy male cat, about a year old, eighty minims of the fluid extract were administered hypodermically. In twenty minutes after giving the injection the pupils began to dilate, the animal exhibiting signs of distress by moaning and slight tremors. These tremors were especially observable about the head. Thirty-five minutes after receiving the injection the animal was seized with violent convulsions, accompanied by moaning and screaming. During the next ten minutes he had eleven convulsions; the tenth and the eleventh being particularly violent. He then lay quiet for the space of ten minutes, during which time the respiration was observed to be only fourteen to the minute, diaphragmatic and spasmodic in character. In the ensuing two minutes he had four convulsions; then again he was perfectly calm for the space of five minutes, during which time the respirations were counted and found to be only ten per minute, each inspiratory effort consisting only of a slight gasp. At the expiration of this time, he had one more convulsion, and was dead in exactly one hour from the time he received the injection.

Autopsy—Ten Minutes after Death.—Pupils dilated to such an extent as to render the iris almost imperceptible; temperature in the rectum 95 4-5° F. (the normal temperature of the cat being 100°); no rigor mortis, the body, extremities, and all the voluntary muscles being in a state of the most complete relaxation. The pectoral muscles blanched and perfectly bloodless. The same bloodless condition was observed in all the muscles examined. The lungs were also entirely bloodless. Several incisions were made into the parenchyma of these organs, but not a drop of blood appeared upon the cut surfaces. The heart was dilated; the right ventricle especially presenting a weakened, flaccid appearance; the cavities of the heart were filled with blood, which had not yet coägulated.

Experiment No. 8.—To a cock pigeon that had been without food or water for three days, ten minims of the fluid extract

were administered hypodermically. The respiration at the time the drug was given was forty to the minute; pulse 160. Thirty minutes after, there being no change in the respiration or pulse, and no nervous phenomena present, the injection was repeated; this time introducing the needle of the syringe through the walls of the thorax posteriorly and penetrating that cavity, directing the point of the instrument in such a manner that, from previous observations, I knew it would penetrate the heart. Almost before I could withdraw the needle, the bird was thrown into violent convulsions, rolling and tumbling about in the most extraordinary manner. These convulsive movements lasted about half a minute, and when they ceased, the bird fell forward upon his breast, making no effort to stand, nor could he retain the position upon his feet when placed upon them, but immediately fell forward upon his head and breast. He remained perfectly conscious throughout, endeavoring to avoid blows when aimed at him, and noticing any noise made in his vicinity. The eyelids were open and the pupils responded to light. He remained in this condition about twenty minutes, after which he had a few convulsions, slight in character, and then becoming, as it seemed, more profoundly affected by the drug, the eyes closed and he appeared rapidly dying; but even in this state he lasted about twenty minutes, moving a little when I knocked upon the floor at his side, and the pupils still responded to light. He had during this time three convulsions, much less violent than the former ones, and finally died seventy minutes from the time of the first injection. The respiration a short time before death was reduced to thirty-six per minute. This was the only change in the respiration, except its spasmodic character toward the close. A few moments before death supervened, the action of the heart became exceedingly rapid, but so feeble as not to be counted.

Autopsy.—The heart was dilated and distended with blood; on allowing the blood to escape from its cavities, a very relaxed and flaccid appearance was presented, especially by the right ventricle. The cerebrum, cerebellum and cord were pale and

bloodless; no puncta being visible in the incisions into these tissues. Liver and gizzard also bloodless.

Experiment No. 9.—To a pigeon whose respiration was thirty per minute, three minims fluid extract were given hypodermically. After five minutes the respiration had fallen to 23; ten minutes after to 18; fifteen minutes after the respiration was 25 and laborious, and there was a violent convulsion with dilatation of the pupils. Some grains of corn that had been swallowed by the bird a few minutes before receiving the injection were now thrown up. After twenty minutes the respiration was 24 to the minute; there was a prolonged violent convulsion, the bird standing upon its feet and flapping its wings violently upon the table; jerking its head down upon the table as though pecking at some object. When the convulsion had passed off, the bird remained standing. After twenty-five minutes there seemed to be complete paralysis, the power of maintaining the erect position was lost, the bird falling forward upon its breast, after which it lay perfectly quiet, making no movements of any kind, except those of respiration. When it was raised to its feet and placed in an erect position, it sprawled about upon the table, for a few seconds, much after the manner of a drunken man; finally falling forward upon its breast as before. After thirty minutes the paralysis seemed to have disappeared, for when placed upon its feet, it remained in that position a few seconds, when it had a convulsion similar to those previously described; but when the convulsion passed off, it still remained standing. That the bird did not, at any time, lose consciousness, was proven by the fact that it endeavored to avoid blows aimed at it. In the next ten minutes there were two convulsions. When placed upon its back, it was unable to turn over, making but feeble efforts to do so. At the end of sixty minutes, respiration was twenty per minute. When placed upon its feet, this position was maintained, there being only occasionally slight tremors of the head, wings and body. The erect position was maintained until after eighty minutes, at which time there was a convul-

sion, though not so violent as the previous ones had been. At the expiration of ninety-five minutes after receiving the injection, the bird had apparently entirely recovered from the effects of the drug, moving about upon the table, walking without any difficulty, and when pushed about, even receiving a sharp blow with the palm of the hand, it was able to preserve its equilibrium. The bird was allowed to remain in this condition for a considerable length of time, to ascertain if it had really recovered from the effects of the drug, which evidently was the case. But, upon being placed in the dorsal position, thus favoring the flow of blood to the cord and nerve centers, there immediately ensued the convulsions, paralysis, falling forward upon the breast, and all the other phenomena which occurred in the former stage, as detailed above. These phenomena lasted about twenty minutes, then gradually disappeared, and the bird again entirely recovered, hopping about upon the table in the most unconcerned and natural manner; even eating a little food that was offered it. The bird was left undisturbed for four hours, and at the end of that time six minims were given hypodermically. The temperature was 105°; thirty minutes after receiving the injection, the drug having produced no perceptible effect, a second dose of ten minims was injected. In seven minutes after giving the second dose there was a violent convulsion, followed in a few seconds by another; these convulsions resembling in every respect those formerly described. In the next fifteen minutes there were six convulsions. The bird then lay quiet a few seconds, and twenty-five minutes after receiving the second injection respiration ceased.

Autopsy.—The thorax was opened immediately. The heart was still beating feebly and imperfectly; this it continued to do for about a minute, after which it ceased a few seconds, and then again there were a few pulsations, lasting, however, but a short time, when the heart ceased beating entirely. This organ was dilated and all the cavities were distended with blood. The brain and cord were pale and anæmic; no puncta vasculosa being visible in the incisions which were made in these organs.

Experiment No. 10.—To a female rabbit, four months old, whose respiration was sixty per minute, pulse 200, and temperature 102 4-5°; twenty minims fluid extract were given hypodermically. After the lapse of fifteen minutes the respiration was 58; pulse 180; temperature 102 3-5°; pupils dilated. After twenty minutes the respiration was 58; pulse 134; temperature 101 4-5°. At this time the animal had six convulsions. Twenty minims tincture of digitalis were administered subcutaneously, and the thorax was immediately opened, exposing the heart and placing the movements of this organ distinctly in view. The heart was beating 76 per minute and very feebly, the contractions being strongest in the left ventricle. About eight minutes after opening the thorax the contractions of the heart became much stronger and more rapid, and the pupils, which, previous to giving the digitalis, had been dilated, were now contracted. This change in the character of the action of the heart, as well as the change in the pupils, can be explained in no other way than that it was owing to the action of the digitalis countercting the effects of the gelseminum. This increased force and frequency of the heart's action lasted only two or three minutes, the contractions again becoming slow and feeble, as before; the heart continuing to beat for thirty minutes after the thorax was opened, growing gradually weaker, slower, and more irregular in its action, and at last dying in diastole. The contractions beginning at the base of the heart, passed down in a vermicular manner to the ventricles. Finally, the auricles ceased to contract, the movements of the organ being confined to the left ventricle, the action of the latter becoming more and more circumscribed, until at last only at the apex of the ventricle were there any movements to be seen.

Autopsy.—Heart flabby, relaxed and dilated; cavities distended with blood. In the left ventricle there was a small clot in addition to the fluid blood which it contained. Lungs were pale and bloodless. Liver contained but a very small amount of blood in its parenchyma. The spleen was bloodless. The stomach being filled with material undergoing the process of

digestion, instead of manifesting a physiological hyperæmia, as might be expected under ordinary circumstances, was pale and bloodless. The kidneys did not present the blanched, bloodless appearance common to the other organs examined; but they contained a larger proportionate quantity of blood than was found in any of the other organs. Although the bladder had been emptied only a few minutes before receiving the injection, this organ was found to be filled with urine.

Experiment No. 11—All of the integument and fascia was removed from the right thigh of an old and very large rabbit (female), and the great sciatic nerve was exposed. The fluid extract was then applied directly to the trunk of this nerve, without causing any loss, either of motion or sensation in the limb below, as was proven by the fact, that when the foot was pricked the leg was jerked up. An incision was made into one of the muscles of the thigh, and the fluid extract was applied to the trembling, quivering muscular fibres. The result was immediate cessation of the trembling and quivering of the cut surfaces. Forty minims of fluid extract were then administered hypodermically. Respiration and the action of the heart were entirely normal, the heart beating 100 per minute when the injection was given. After fifteen minutes she had a convulsion, which was followed by a rapid diminution in the frequency of respiration, and by a corresponding decrease in the rapidity of the heart's action; the heart now beating 76 per minute; the pulsations being very irregular and intermittent. The respirations continued to diminish in frequency, but after a few minutes the heart was beating a little faster, though not near so rapidly as before the administration of the drug. There were now several convulsions, more or less violent, extending through a period of about ten minutes. Respiration and the heart's action still existing, in the interval between the convulsions both the fore and hind feet were repeatedly pricked with a knife, but they were not withdrawn, nor was the slightest reflex action in the limb produced. When the convulsions ceased, the animal lay as if paralyzed, making no movement of

any kind, except that of respiration, breathing ten times a minute, the respiration being wholly diaphragmatic, and the heart beating so rapidly and feebly that the pulsations could not be counted. At this time also the feet and legs were pricked without producing any responsive movements. The trunk of the sciatic nerve was now irritated, the result being contractions in all the muscles to which it is distributed. The faradaic current was applied to one of the muscles, and immediately it was seen to contract. It is to be observed that the above phenomena were exhibited while the animal was yet alive. Death ensued in about thirty minutes after the administration of the drug.

Autopsy.—Presented the usual pale, anæmic condition of all the organs that is found after poisoning with this drug. The heart was dilated and the cavities were filled with blood. The walls of the heart were relaxed and flabby.

Experiment No. 12.—A muscle was cut from the thigh of a dog. The fibres of the muscle were trembling and quivering under the stimulus of the cold air. In this condition it was soaked for ten minutes in the fluid extract of gelseminum. At the expiration of this time a powerful electric current applied to the muscle failed to produce contraction.

Experiment No. 13.—The thigh of a dog was amputated, and ninety minims fluid extract were injected into the femoral artery, thus bringing the drug into direct and immediate contact with the muscular tissue and all the other tissues of the thigh. A mechanical stimulus, as the point of a knife, was applied to the sciatic, and also to the anterior crural nerve, but without producing any contraction in the muscles to which these nerves are distributed. A mechanical stimulus applied to the muscles themselves failed to produce any contraction.

Experiment No. 14.—The thigh of a dog was amputated, and 100 minims fluid extract were thrown into the femoral artery. Just as in the preceding experiment, when a mechanical stimulus was applied to the sciatic and crural nerves, also to the muscles themselves, no contractions were produced. A

powerful electric current was applied to the sciatic nerve, but it had no effect whatever upon the muscles. The current used was, first, the induced, and then the direct. But when the battery was applied to the muscles themselves, the result was contraction in all the muscles through which the electric current was passed. When the current was passed through the tibial muscles of the amputated limb, the foot was caused to flex and extend in the most natural and life-like manner.

Experiment No. 15.—To a bitch; six months old; whose pulse was 120; respiration 29; twenty minims fluid extract were given hypodermically. At the expiration of an hour there was no change in the pulse or respiration, and no nervous phenomena were manifested. The animal had been deprived of water for three days previous, but at this time there was a free flow of urine from the bladder. There being no symptoms to indicate that the drug was having any effect upon the nervous or circulatory system, a second hypodermic injection of 30 minims was given. After two hours, there still being no symptoms to indicate that the system was affected by the two previous doses, a third injection of 60 minims was administered. A few moments after receiving the third dose she manifested great uneasiness, walking about the room with the neck arched forward and the head bent down so that her lower jaw almost rested upon her breast, moaning and whining. In walking she did not proceed straight forward, but advanced in a semi-circular or zig-zag course, at the same time planting her feet firmly upon the floor, as if to make certain of a good and sure foothold. The pupils at this time were dilated. After three hours, 90 minims were injected hypodermically; the pulse being 94; and respiration 16. There was a free and very abundant flow of urine, lasting some length of time, or rather the flow of urine was interrupted for a few seconds; then beginning again, and again interrupted, etc. This phenomenon lasted several minutes, and then ceased, no more urine passing from the bladder, although the bitch lived for several minutes afterward. In a very short time after giving the last injection,

there were as many as eight convulsions, in quick succession, followed by immediate death. During the whole time of the experiment, the bitch manifested a fondness for lying in a particular corner, behind a stove. She seemed to retain both her consciousness and her perception of locality, for as often as she was removed from this favorite corner, she returned to it, walking, or rather, staggering along in the reeling, zig-zag manner mentioned. She showed no evidence of pain when the needle entered the skin at the last injection, although she was perfectly conscious, as was proven by the fact of her closing the eye hastily when a finger was thrust toward it.

Autopsy—Two Hours after Death.—Rigor mortis just beginning to make its appearance; the mouth, tongue and fauces presented a pale, bloodless appearance. The pectoral muscles were bloodless; lungs contained about the normal quantity of blood. The heart was flabby and relaxed, the right ventricle especially so; cavities were dilated and filled with coägulated blood. The liver tissue contained about the normal amount of blood. Bladder distended with urine. Cerebrum, cerebellum, medulla oblongata and spinal cord, were pale and bloodless; no puncta vasculosa being visible when incisions were made into these organs.

Experiment No. 16.—To ascertain whether the convulsions produced by gelseminum are of cerebral or spinal origin, the spinal cord of a bitch, six months old, was cut in the cervical portion, just low enough, however, to leave the anterior extremities still under the control of the cerebrum. Two drachms of the fluid extract were then administered hypodermically. This was followed in about thirty minutes by trembling of both the anterior and posterior extremities. The respiration became laborious, and of a gasping, spasmodic character. These effects lasted but a short time, soon passing away, and the animal then lay perfectly quiet, respiration again resuming the normal character. That the cerebrum was not affected, was proven by the fact, that the bitch was cognizant of any noise made in the room, as well as by the expression of the eyes and the

pricking up of the ears when spoken to. One drachm was now given, producing, after a few minutes, the trembling of both the anterior and posterior extremities, as well as the embarrassment of respiration, which followed the first dose. At this time the pupils were first noticed to be dilated. Before these effects had entirely passed off, two drachms more were administered, and in a few minutes the trembling of the extremities was succeeded by violent convulsions, both of the anterior and posterior limbs.

There was no perceptible difference in the character of the convulsions, although the anterior limbs were under the control of the cerebrum; whereas, the connection of the posterior limbs with the cerebrum was severed by the section of the spinal cord. These effects lasted about fifteen minutes, when the convulsions gradually ceased, the respiration becoming normal, and the animal was perfectly quiet and calm; seemingly asleep or in a stupor, from which she was easily aroused by calling to her, or knocking upon the floor at her side. She was allowed to remain in this condition for the space of two hours; at the end of this time three drachms were administered, producing in a few minutes the condition of respiration and trembling of the limbs heretofore described; the trembling of the extremities giving place presently to the most violent convulsions, both in the posterior and anterior limbs, during the course of which she rolled over and over upon the floor. This, though, was probably owing to the fact that the fore legs were under the control of the cerebrum. The respiration was short, quick and gasping.

This condition lasted about five minutes, the convulsions becoming less violent, ceasing in the anterior extremities a few seconds before death; those of the posterior disappearing a few seconds prior to those of the anterior extremities. Reflex action was destroyed in the posterior extremities after the first injection of two drachms of the drug, while in the anterior extremities, which were still connected with the brain, it persisted until within a few minutes before death.

Experiment No. 17.—The abdominal cavity of several of the animals which were killed with the drug, was opened immediately after death, and in two instances while the heart was still beating. In every case where this was done, the exposure of the intestines to the cold atmosphere failed to produce any movements or contractions of their muscular coats.

Experiment No. 18.—The object of this experiment was to ascertain whether or not the effects of digitalis upon the system would prove antidotal to those of gelseminum. In a former experiment, 80 minims of the fluid extract having sufficed to produce death in a cat in an hour, to a second the same qauntity (80 minims) was given hypodermically, and this was followed in fifteen minutes by a subcutaneous injection of 60 minims fluid extract digitalis. The effects of the gelseminum were manifested in about thirty minutes by a tetanic spasm in the muscles of the neck, the head being drawn forward and downward, so that the face regarded the breast, as shown in the experiment upon the dog. Vide Experiment No. 15.

The pupils were dilated, and the respiration became very slow at first, then gasping, spasmodic and irregular. These phenomena were succeeded in a few minutes by violent convulsions of the whole body. These convulsions differed from those produced in the case where gelseminum was given alone, only in being more severe. The animal, instead of lying upon the floor during the convulsions, as was the case with those produced by gelseminum alone, leaped about in the most violent manner, springing several times a distance of two feet. The convulsions ceased a few seconds before death, giving place to paralysis, both of motion and reflex action. Pricking of the feet produced no movements, either voluntary or reflex. Respiration ceased at the expiration of one hour from the time the gelseminum was given. As soon as this occurred, the thorax was opened and the heart found to be still beating. The action of the heart continued for fifteen minutes, the pulsations being very slow, but regular. After the heart had ceased beating, touching it with the point of a knife produced a contraction.

That the heart died in diastole, was proven by the fact that it was dilated and the cavities filled with blood. The heart did not present the usual relaxed, flaccid appearance that is so characteristic after poisoning by gelseminum, except on the walls of the left ventricle, the right ventricle being firmer and more solid.

This concludes the experiments upon the lower animals; those which follow were performed for the purpose of studying the action of the drug upon man.

Experiment No. 19.—Six drops of the fluid extract gelseminum were administered by the mouth to a negro man nineteen years old. After one hour, there being no change produced either in the pulse, respiration or temperature, the dose was repeated. After four hours there was still no change, either in pulse, respiration or temperature, except a slight increase in frequency of the former, due to the fact that the subject of the experiment had abstained from food for nearly twenty-four hours previous. Eight drops were given. After five hours there was no change in pulse, respiration or temperature. After six hours there was a most copious flow of urine. The man's urine, for several days previous, had been very scanty, according to his own statement, although not questioned upon the subject. After seven hours, the drug having produced no effect upon respiration, pulse or temperature, the man was discharged.

Experiment No. 20.—The subject of this experiment was the same negro employed in the preceding one. Fifteen drops fluid extract were given by the mouth, at one dose, upon an empty stomach, the pulse at the time being 87, respiration 21, and temperature 98½°. It was not until the expiration of three hours that any marked effects were observed to result from the administration of the drug. At this time there was considerable nausea, and indistinctness of vision, though the pupils were normal, and a sensation of general weakness and relaxation pervaded the entire system. Upon attempting to walk, the gait was at first slightly staggering, resembling that of in-

toxication. The pulse was 64, respiration 21, and temperature 95 2-5°. After four hours all these symptoms disappeared, except the impairment of vision and the sensation of general weakness and relaxation; these, however, being present only in a very slight degree. The pulse was 84, and respiration and temperature having regained the normal standard the man was discharged.

Experiment No. 21.—I took, by the mouth, five drops of the fluid extract; my pulse at the time being 83, and respiration 20. After two hours no symptoms of the action of the drug being present, ten drops more were taken by the mouth. After three and a half hours from the first, and one and a half hour after the second dose, my pulse was 78, respiration 14, and temperature 97 4-5°. After four and a half hours pulse was 53, and respiration 12. Walked across the room and back, when my pulse rose to 65 beats. Experienced a feeling of weakness in my knees; vision slightly indistinct; pupils normal. After five hours my pulse was 53. At this time there was an abundant flow of urine, this secretion having been scanty for some days previous. After five and a half hours my pulse was 63; at this time the weakness in my knees and indistinctness of vision had entirely disappeared.

Experiment No. 22.—At 4:30 P. M., having swallowed two ounces of whiskey, with a view to its stimulating action upon my pulse, and having walked rapidly some distance, I had a full, strong pulse of 100 per minute, my normal pulse being 85 per minute. I injected under the skin of my left arm five minims fluid extract. I examined my pulse at 5 o'clock, and it had fallen to 84; vision a little indistinct. At 5:30 pulse was down to 80 beats per minute; vision more disturbed. At 6 o'clock pulse 76, and temperature 98 1-5°; disturbance of vision very great. It seemed almost impossible for me to fix my gaze upon any object, and when I succeeded in doing so, the object, whatever it happened to be, would fade away at first, and then reappear again. There was a sensation of fullness in my head, and a feeling of great weight and

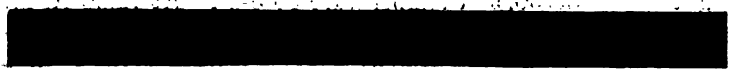
heaviness about the eyelids. When I opened my eyes to their fullest capacity, it seemed as though they were but half open. At 6:15 pulse was 72; no change in the other symptoms. At 6:30 pulse stood at 69; no change in the other symptoms. At 6:45 pulse was 69, and respiration 16; no change in temperature. At 7 o'clock I partook of a light supper, consisting of bread, tea and fruit. Now, during the process of healthy digestion, the temperature is elevated; the pulse and respiration being also slightly accelerated. I make this remark in order that the succeeding record may be more striking. At 7:45 pulse was 60, and respiration 15; no change in temperature; the disturbance of vision completely passed off at 8 o'clock P. M., after which time no uncomfortable symptoms were experienced. At 8:15 pulse 60, respiration 15, and temperature 97 2-5°; At 8:45 pulse 59, and temperature 97 2-5°. At 9:15 pulse 60, and temperature 97 2-5°. At 9:45 pulse 60, and temperature 97 2-5°. I then arose from the half-reclining posture which I had occupied during the experiment, and walked across the room rapidly for five minutes. On resuming my former position, my pulse, during the first minute, indicated 67; but in ten minutes it had fallen again to the old rate of 60 per minute. The temperature was not at all affected by the exercise, the thermometer recording 97 2-5°, as before. At 10:30 pulse 58, and temperature 97 1-5°; at this time I passed about eight ounces of rather high-colored urine. I now ascended two flights of stairs and returned, but there was no increase in the pulse or temperature produced by the exercise. At 11 o'clock P. M., pulse 63, and temperature 97 1-5°; the former very soft and compressible. At 11:30 pulse 60, and same character; temperature 96 3-5°. At midnight pulse was 60, and temperature 96 3-5°. At 12:30 A. M. pulse 60, and temperature 96 3-5°. Retired and slept soundly for five hours; awaking at 7:30 A. M., I walked about several times, after which an observation showed my pulse to be 61 per minute, irregular and compressible in character. Temperature was 97 4-5°; fifteen hours having elapsed since I had

taken the drug. During the forenoon I passed an unusually large quantity of urine, and my pulse did not regain its normal force and frequency until 10 o'clock in the morning. As before stated, the disturbance of vision and the other unpleasant sensations passed off completely at 8 o'clock in the evening, after which time I felt no untoward symptoms whatever. It is worthy of special remark, that during the time I was most powerfully affected by the drug (which was the interval from half past 8 to half past 12), I experienced no unpleasant sensations of any kind; nor at any time, as far as I was able to judge, was the cerebrum affected or the mental faculties at all impaired by its action. The gelseminum produced no local irritation in the arm where the needle was introduced, the puncture healing rapidly and without any trouble.

Experiment No. 23.—Twelve drops of the fluid extract were administered to a man nineteen years of age. After the lapse of one hour, the pulse had fallen twenty beats per minute. His vision was slightly indistinct, and he complained of weakness in his knees. The sphygmograph was now applied to the right radial, and the following tracing obtained:

After two hours the pulse remaining the same, but vision having improved, the sphygmograph was again applied, showing the succeeding tracing:

After three hours, the pulse having risen three beats per minute, the instrument was again applied, the result being as follows:



In all these tracings, the systolic wave indicates a diminution in the propelling power of the heart. The wave of diastole shows that this period of the cardiac rythm is lengthened. The wave of dicrotism, which is especially marked in the third

tracing, is considered by the highest authorities* to indicate invariably a dilatation of the capillaries. Finally, all of these tracings, not only when considered as a whole, but each event when considered separately, show a diminution of the blood pressure.

This concludes the series of experiments. The following pages are devoted to deductions and conclusions as to the physiological action of gelseminum, based upon the facts presented for consideration in the foregoing experiments. The modus operandi of a drug, the action of which is so complex and varied as that of gelseminum, can only be thoroughly understood when the experiments are analyzed and the effects upon the organism are considered system by system.

THE HEART.

In all of the experiments previously detailed, it is a noticeable and prominent fact that the drug has a directly depressant effect upon the heart; that the action of the heart is diminished both in frequency and force. In one case (Experiment No. 22), the pulse fell forty beats in four hours, and did not regain its normal frequency until after the expiration of eighteen hours.

In two instances it was particularly noted, that a few seconds before death the pulse became very rapid. (See Experiments 8 and 11.) But when it is remembered that a rapidly acting heart is indicative of a weak heart, the fact noted above only adds weight to the evidence of cardiac debility produced by the drug. The sphygmographic tracings (Experiment No. 23) obtained from a subject under the influence of gelseminum, indicate very clearly that the period of the cardiac rythm occupied by the diastole is very much lengthened, and that the force of the systole is diminished in a corresponding proportion. The autopsy in Experiments Nos. 6, 7, 8, 9, 10, 11, and 15, shows the heart to have died in diastole; the cavities

* Holden on the Sphygmograph.

being dilated and filled with blood, and the heart-walls themselves presenting a flaccid and relaxed appearance.

This action of the drug upon the heart might be produced in two ways: First, by paralyzing the sympathetic, which is the motor nerve of the heart; or, second, by stimulating the inhibitory nerve—the pneumogastric. But, as will be seen presently, the respiration is also lessened in frequency and very much embarrassed. The action of the drug upon the function of respiration, if effected through the pneumogastric, must be brought about by paralyzing the nerve. Now, if it acted upon the function of respiration by paralyzing the pneumogastric, the effects of the drug upon the heart would be directly opposite of what is found to be the case. The conclusion is, therefore, that the drug acts both upon the heart and upon respiration by paralyzing the sympathetic. The function of respiration being directly under the control of the medulla oblongata, and the sympathetic system being in connection with this important nerve centre, the action of the drug, both upon the heart and upon the respiration, might also be produced by a paralysis of the medulla. It is probable that it acts upon the heart and respiration in both of the ways just described.

THE RESPIRATION.

The action of any drug upon the respiration is usually treated as a matter of minor importance, when studied in connection with its effects upon the heart, because the function of respiration and the state of the heart's action are so intimately related, and the attention of observers is more forcibly directed to the latter. But when it is remembered that in one instance, Experiment No. 9, the heart was still beating after respiration had ceased, it is evident that the effect of gelseminum upon this important function demands more than a passing notice. In the experiments upon man, under the influence of medicinal, non-toxic doses, the frequency of respiration was greatly diminished (see Experiments Nos. 21 and 22), while in the experiments upon the lower animals, after the administration of poisonous doses, not only was the respiration very much

decreased in frequency, but it became laborious, gasping and spasmodic (see Experiments Nos. 7, 8, 9, 10, 11 and 15). It was particularly noticed in Experiment No. 9 that respiration was arrested before the heart ceased beating. In this instance, then, death occurred fyom paralysis of respiration. The modus operandi of the drug in producing these results upon respiration has, it is hoped, been sufficiently explained in the foregoing section on the heart. The ground was there taken, that the effects of gelseminum upon respiration were not caused by a paralysis of the pneumogastric, and this view is further strengthened by referring to Experiment No. 11, in which it was proven that the nerve-trunks are not paralyzed by the drug. It then only remains, that the effects upon respiration are produced by a paralysis of the respiratory centres.

THE CEREBRUM.

Gelseminum seems to have no effect upon the cerebrum, either in small doses or large ones. In no instance was there anything like drowsiness, coma or delirium. The animals experimented upon were perfectly conscious during the whole time they were under the influence of the drug up to the very moment of death. (Experiments 8, 9, 15 and 16.)

In the experiments upon man the result was the same.

When the action of the drug upon the system was so great as to reduce the temperature of a healthy subject nearly two degrees below the normal standard, the mind remained perfectly clear and unaffected, excepting a little uneasiness about the termination of the affair, (Experiment 22.) That the convulsions produced by gelseminum are not of cerebral origin, has been determined by the direct experiment (see No. 16) of cutting the spinal cord. But perhaps the cerebrum may exercise some influence upon these convulsions; for it will be remembered that in the experiment mentioned above, the convulsions ceased in the posterior extremities, which were only under the control of the lower section of the cord a few seconds before they had disappeared in the anterior extremities.

THE CEREBELLUM.

It is with physiologists a question sub-judice, whether the faculty of muscular coördination resides in the cerebellum, according to Flint and Flourens; in the posterior columns of the spinal cord, according to Duchénne; whether it is dependent upon what is called by Sir Charles Bell "the muscular sense," or whether, according to Hammond, it has no existence at all. But certain it is, that in two instances (Experiments Nos. 9 and 15) there were symptoms strongly resembling those of muscular incoördination. These symptoms might have been deceptive and dependent upon other causes, as partial paralysis, etc. The distinction is one of such a delicate nature that I do not desire to make a positive statement upon this point.

THE SPINAL CORD.

The action of gelseminum upon the spinal cord is to be considered: First, as regards the phenomenon of convulsions; second, the action of the drug in producing paralysis; and third, its effects upon the reflex activity of the cord; for all three of these results—convulsions, paralysis, and loss of reflex activity—might be produced by the drug independent of any effect upon the spinal cord.

Convulsions.—In Experiments Nos. 4, 6, 7, 8, 9, 10, 11, 15, 16 and 18, it will be observed that the drug produced violent convulsions. In several of these instances the convulsions did not appear until a considerable time had elapsed after the administration of the drug. But in two cases in which gelseminum was thrown right into the heart itself (Experiments Nos. 8 and 6) the convulsions were almost instantaneous. In every case this phenomenon was the first manifestation indicative of the powerful effect of the drug upon the nervous system. The point to be decided is, are these convulsions of cerebral, spinal, or peripheral origin?

In Experiment No. 16, cutting the cord and thus severing all connection between the cerebrum and the lower half of the body and posterior extremities did not prevent the convulsions

in these parts, therefore the convulsions can not be of cerebral origin.

When gelseminum was injected into the amputated thigh, no convulsions occurred (Experiments Nos. 13 and 14) in the muscles of this limb; therefore the convulsions produced by the drug can not be of peripheral, and must be of spinal origin.

Paralysis.—After the convulsions ceased, which was only a few minutes before death, in many instances (more particularly in Experiments Nos. 9, 11 and 16) they were followed by paralysis, the animal making no movements of any kind, except those of respiration; the paralysis continuing until death. Experiment No. 11 shows that while this paralysis existed, both the nerves and muscles responded to stimulants; therefore, the paralysis can not be of peripheral origin, and must be of spinal origin.

Reflex Action.—Experiments Nos. 11 and 16 show reflex action to have been lost while the animal still lived. That this loss of reflex action is not due to paralysis of the nerve trunks, is proven by reference to Experiment No. 11, in which irritation of the sciatic produced contraction in the muscles after this loss of reflex activity. (In an experiment, see No. 4, upon a cold-blooded animal, reflex action persisted even after death.) This loss of reflex action is, therefore, due to central paralysis.

THE NERVE TRUNKS.

Experiment No. 11 shows that in an animal so near death that both reflex activity and voluntary motion were destroyed, the nerve trunks still responded to stimulants. On the other hand, when gelseminum was injected (Experiments Nos. 13 and 14) into the artery of an amputated thigh, the nerves did not respond to stimulants, but the muscles did. Perhaps in the latter instance the direct application of the drug produced a paralysis of the intra-muscular nerve endings.

THE VOLUNTARY MUSCLES.

Although the direct application of gelseminum destroys the

muscular contractility (see Experiments Nos. 11 and 12), yet, after poisoning by the drug, the muscular contractility still remains. It is probable that in poisoning by gelseminum, the voluntary muscles are not affected, as the animal dies long before a sufficient quantity of the drug could be absorbed to produce the effects resulting from its direct application to the muscular tissue.

THE INVOLUNTARY MUSCLES.

The action of the drug upon the involuntary muscles was not made the subject of direct and special experiment; yet in several instances, at the autopsy, the bladder was found distended with urine, showing an inability on the part of the muscular coat of this organ to expel its contents.

Again, by reference to Experiment No. 17 it will be seen that the exposure of the intestines to a cold atmosphere produced no movements in their muscular coats.

These two facts, taken in connection with the dilated condition of the capillaries (as shown in Experiment No. 23), indicate a paralyzing effect produced by the drug upon the involuntary muscles.

THE CAPILLARIES.

Although no observations were made with the microscope as to the effect of the drug upon the capillaries, yet a much more certain and reliable experiment was made with the sphygmograph (Experiment No. 23). This instrument shows the capillary vessels, even under the influence of medicinal doses, to be in a state of dilatation, dependent upon the sedative or paralyzing effect of the drug upon the vaso-motor nerves, as was seen to be the case in discussing its action upon the heart. This dilatation of the capillaries coincided also with the condition of the involuntary muscles found in different parts of the body, as the bladder and the intestines. (See Experiments Nos. 6, 10, 15 and 17.)

THE TEMPERATURE.

The effects of gelseminum upon the temperature in Experiments Nos. 7, 10, 20, 21 and 22, were very marked. This was

particularly the case in Experiment No. 22, in which the temperature of a healthy subject was reduced, in seven hours, by a hypodermic injection of five minims, as low as 96 3-5°, and it did not regain the normal standard until the expiration of nearly eighteen hours.

In the experiments upon animals under the influence of poisonous and fatal doses, the temperature was very much diminished, more especially in Experiment No. 7, in which the temperature, ten minutes after death, was 95 4-5°, the normal temperature being 100°. This enormous reduction of temperature produced in the system of healthy animals by toxic doses of the drug, and in the system of man under the influence of medicinal doses, is rather difficult of explanation.

The sources of animal heat are so numerous and dependent upon so many varied and mysterious processes taking place in the animal economy, that to enter upon a discussion of all these points would require too much space, and withal be not very profitable. It has been seen heretofore that respiration is very much diminished in frequency, and the fall in temperature is, no doubt, dependent in part upon the diminished consumption of oxygen and the consequent diminution in the processes of combustion going on in the body.

The temperature and the circulation bear a direct relation to each other, rising and falling together; the temperature always being in direct ratio to the arterial pressure.

Gelseminum lowers the frequency of the pulse, and by dilating the capillaries (see Experiment No. 23), produces a remarkable diminution of the blood pressure. Upon this, no doubt, depends principally the fall in temperature.

The action of the drug in producing a reduction of fever temperature (as it will hereafter be seen to do) admits of a very easy explanation. According to the very accurate researches and studies of Traube, every fever begins with an energetic contraction of the cutaneous capillaries, preventing the giving off of heat to the air, and thus more heat is collected in the body.

Gelseminum dilates the capillaries, even in medicinal doses (see Experiment No. 23), and thus the accumulation of heat in the body is prevented.

THE PUPIL.

In medicinal doses, gelseminum has but little or no effect upon the pupils; for, in the experiments upon man (see Experiments Nos. 20, 21 and 22), when the respiration, circulation, and temperature were powerfully affected, the pupils were neither contracted nor dilated, but remained perfectly normal.

In experimenting upon animals, it was only after the administration of fatal doses that the pupils were dilated. This was observed to occur either simultaneously with the appearance of convulsions or immediately after them.

To enter into the endless discussion of how this dilatation of the pupils might be produced, would be both out of place and unprofitable. Suffice it to say, that this effect might be produced in one of two ways: First, by stimulating the sympathetic; second, by paralyzing the oculo-motor nerve or its centres. That gelseminum does not stimulate the sympathetic, is evidenced by all of the foregoing experiments, particularly No. 23, as well as by what was said in the section on the heart, of which it is unnecessary here to speak.

As Experiment No. 11 shows that the nerves are not affected, the dilatation of the pupil must, therefore, depend upon paralysis of the oculo-motor centres.

THE VISION.

In Experiments Nos. 20, 21, 22 and 23, vision became indistinct, and that, too, without any dilatation of the pupil or implication of the cerebrum.

UPON GLAND ACTION.

Gelseminum has a decided effect upon the urinary secretion, as will be seen by reference to Experiments Nos. 6, 10, 15, 19, 21 and 22; especially in Experiment No. 15 was the amount of urine voided very great, and after death the bladder was found

filled with urine. In Experiment No. 19 the secretion of urine was greatly increased, the amount passed by the man for some days previous having been scanty. In Experiment No. 22 the amount of urine passed was much greater than usual, and continued to be excessive for many hours after.

ELIMINATION.

In the experiments upon man (Nos. 19, 20, 21 and 22) the drug was eliminated at different periods, varying from five to twenty hours, and by the kidneys, as would seem to be indicated by the increased amount of urine.

MODE OF DEATH.

In poisoning by gelseminum, death occurs not from a sudden cessation of the heart's action, but from a gradual paralysis of this organ. In one instance, in which the mode of death was made a point of special observation (Experiment No. 9), this occurred from paralysis of respiration.

ANTIDOTES.

This subject was not particularly studied in this series of experiments. Experiments Nos. 10 and 18 seem to show that digitalis might prove to be antidotal; but this point needs further investigation.

In conclusion, I beg leave to offer the following report of three cases treated with gelseminum, each case being typical of the disease which it represents.

REMITTENT FEVER.

C. S., a native of Germany, aged nineteen, occupation laborer, was sick three weeks before he came under observation. Was first taken with a chill, which, during the first week, recurred every day, and afterwards every other day; had a continued fever all this time. Came under observation November 6, 1874, at which time he had a temperature of 103½°, respiration 36, pulse 92, there being no difference between the morning and evening temperature. The fever continued at

this height for five days, during which time he had two chills. On the 11th of November he began taking five drops of concentrated tincture of gelseminum every three hours.

Table No. 1.

Date.	Hour.	Temp.	Resp.	Pulse.	REMARKS.
Nov. 11	7 P. M.	101	32	86	
" 12	7 A. M.	100	32	84	
" "	7 P. M.	101½	36	90	
" 13	7 A. M.	100	40	98	
" "	7 P. M.	100½	38	92	
" 14	7 A. M.	99½	36	88	
" "	7 P. M.	101½	30	86	
" 15	7 A. M.	99½	36	94	
" "	7 P. M.	103	38	96	
" 16	7 A. M.	101	36	82	At this time the dose was doubled. There was dimness of vision and weakness in the knees, and an increased flow of urine.
" "	7 P. M.	100½	32	98	
" 17	7 A. M.	99½	32	86	
" "	7 P. M.	101	34	90	
" 18	7 A. M.	100	32	84	
" "	7 P. M.	102½	36	92	
" 19	7 A. M.	99½	28	74	
" "	7 P. M.	100½	32	86	

The progress of this case not being as favorable as was desired, the gelseminum was withdrawn, and under the influence of quinine the patient rapidly improved.

PNEUMONIA.

S., a native of England, aged forty-eight years, a laborer. First attack on Wednesday, October 21, 1874; at 5 o'clock P. M. was taken with a chill. Visited by a physician on the 22d and 23d, who gave him eight doses of quinine in the two days. Came under observation on the 24th of October at 12 M. A physical examination revealed bronchial respiration in superior lobe of left lung posteriorly; also in the inferior portion of the superior lobe of right lung posteriorly. Dullness on percussion corresponding in extent to the same regions. Expectorating "brick-dust" sputa. Five drops of a concentrated tincture of gelseminum, equal in strength to the fluid extract, were ordered to be given every three hours during the day.

The following table shows the result of the treatment:

Table No. 2.

Date.	Hour.	Temp.	Resp.	Pulse.	REMARKS.
24th.	12 M.	101½	30	98	At this time first dose was taken.
"	7 P. M.	101	28	92	
25th.	7 A. M.	98½	24	76	Bronchial respiration disappeared.
"	7 P. M.	99	24	76	
26th.	7 A. M.	98½	18	62	
"	7 P. M.	98½	20	70	
27th.	7 A. M.	98½	20	64	Drug was discontinued.
"	7 P. M.	98	20	68	
28th,	7 A. M.	98½	22	64	
"	7 P. M.	98½	20	66	
29th.	7 A. M.	98½	20	72	Patient convalescent; discharged.

In the above case it will be observed that the withdrawal of the medicine was not followed by exacerbation of the febrile symptoms. This case ran a remarkably rapid course. The man was convalescent within a week from the date of the premonitory rigor. Nineteen hours after the administration of the first dose over the regions where there had been bronchial respiration, submucous râles were heard, the latter being soon followed by normal vesicular respiration.

ACUTE ARTICULAR RHEUMATISM.

W. Q., a native of Ireland, aged forty years; occupation a laborer.

History.—Has had several severe attacks previous to this one. The right knee, both ankle joints, both shoulder joints, and both wrist joints, are involved. When he first came under observation he had high fever; all the phenomena of acute rheumatic fever being present and well marked. He was unable to walk, and had been sick about a week before he came under treatment.

The following table shows the result of treatment:

Table No. 3.

Date.	Hour.	Temp.	Resp.	Pulse.	REMARKS.
21st.	7 P. M.	99½	24	96	Ordered xxx. gtts. tr. gelsem. every three hours. Remarkable diminution in all of the febrile symptoms. Kidneys beginning to act freely. Dose increased to forty drops every three hours. When the patient was fully under the influence of the drug, there was disturbance of vision, varying in degree from simple indistinctness to complete amblyopia. There was a feeling of weakness in the knees, and a sensation of general relaxation pervading the entire system. The kidneys began to act freely after a few doses, and the secretion of urine continued to be abundant during the whole time of the administration of the drug. Before the treatment commenced, the patient was suffering a great deal with his joints; but after the gelseminum began to have its effects—as was indicated by the abatement of the fever, and also by the large amount of urine secreted—the pain notably diminished in all the joints, until at this time, November 29th, he is entirely free from pain in all the articulations which were affected, excepting the right wrist, which continues to trouble him a little, but it also is rapidly improving. Although the pain is relieved and the patient feels much improved, he is still unable to walk. The medicine was continued for two weeks longer with the same results as to respiration, pulse and temperature; and at the end of that time the patient could walk, although with difficulty, still without any pain.
22d.	7 A. M.	98½	22	92	
"	7 P. M.	100½	26	98	
23d.	7 A. M.	98½	22	90	
"	7 P. M.	99	24	84	
24th.	7 A. M.	98½	22	92	
"	7 P. M.	100	22	86	
25th.	7 A. M.	98	22	84	
"	7 P. M.	99	24	74	
26th.	7 A. M.	98½	26	78	
"	7 P. M.	99	24	80	
27th.	7 A. M.	98½	22	74	
"	7 P. M.	98½	22	78	
28th.	7 A. M.	98	24	72	
"	7 P. M.	98½	22	78	
29th.	7 A. M.	98½	26	90	
"	7 P. M.	98½	28	86	

NOTE.—The author of this Thesis received the Thesis Prize of the Louisville Medical College March, 1875; also the Prize offered by Messrs. John P. Morton & Co. for the best Thesis on Materia Medica and Therapeutics.—E. S. G.

ART. II.—THE FACIAL EXPRESSION OF CERTAIN ABNORMAL MENTAL STATES. By ALLAN MCLANE HAMILTON, M. D., Lecturer upon Diseases of the Nervous System at Long Island College Hospital, New York, etc. [Read before the New York Society of Neurology and Electrology, March, 1875.]

Mr. President and Gentlemen,—To introduce some pictures I am about to show you, by means of the oxy-hydrogen lantern this evening, I wish to make a few preliminary remarks upon the portrayal by the muscles of expression of various irregular or abnormal psychical states.

There are many cases of insanity that offer obstacles to the making of a diagnosis, and in some of these certain changes in facial expression are all we have to guide us. Then, again, there are nervous diseases expressed by the features in such a striking way that the incautious observer may be apt to confound them with other diseases of the brain, eventually terminating in mental aberration. The *facies* of some acute diseases, not essentially nervous, should be studied, as oftentimes it will be necessary to make a differential diagnosis. Among these affections, I may allude to the delirium or pseudo-delirium of certain fevers, usually connected with peculiar expressions stamped clearly upon the face of the patient.

The subject of normal physiognomy, so sagaciously written upon by Lavater, and since his day so degraded by so-called phrenologists and others, is too extensive for me to discuss, except in a general way. I will only allude to it in illustrating certain perversions in its integrity in the various states I shall consider.

Dr. Tuke gives the analysis of sane physiognomy as follows: "It is composed of three forms of expression—intellectual, emotional and propensive. Intellectual may be divided into *sensational, perceptive, and reflective.*" The first is characterized by activity of the organs of sense, notably the eyes. The second by a certain fixedness of the features that indicates concentrated attention. The third—namely, the *reflective*, is de-

pendent upon inactivity of the organs of sense, associated with fixedness of the muscles of the face.

The intellectual and emotional expressions may often coëxist. The emotional expressions are very numerous, but all may be grouped together under three heads: First, those that are evidence of exaltation of the higher or pleasurable emotions. Second, those indicative of the base or depressing emotions. The third includes those that partake of both.

Joy is an example of the first; grief, anger, and fear of the second, and pity of the third. The happy emotions are expressed by contraction of the muscles at the corners of the mouth and those controlling the closure of the eyelids. The upper lip is somewhat raised and the eyeballs nearly, if not completely, covered. Duchenne's experiments prove that in the exhibition of joy, the great zygomatic muscles draw the corners of the lip backward and upward. The raising of the upper lip is due, according to Henle, to traction exerted by the orbicularis of the eye when it contracts. (This is by no means certain, however, for it is very easy to close the eyes without producing any elevation of the upper lip.) *Violent* contraction of the orbicularis produces it by contraction of other facial muscles. With the elevation of the upper lip there are produced a number of wrinkles beneath the eyes and at the root of the nose. The depressing emotions are expressed by dilatation of the nostrils, pouting of the lips, and contraction of the muscles of the brow. Pride and scorn are expressed by expansion and elevation of the alæ of the nose and corrugation of the skin covering it, and by elevation of the upper lip or middle of the lip. In fear, by falling of the lower jaw, exposure of the white of the eye, elevation of the eyebrows, and widely dilated nostrils. Suffering is expressed by contraction of the corrugator supercilii. The eyebrows are consequently drawn downward and inward toward the root of the nose, causing vertical furrows. Disdain and indifference are displayed by exposure of a canine tooth on one side. Horror and terror are expressed by an increase in the number and depth of the wrinkles of the

forehead, and by opening of the mouth and exposure of the sclerotics of the eyes, and with erection of the hair.

We should pay close attention to the variation of these different expressions in persons who we may suspect to be insane. Oftentimes their special predominance or incompatible association will enable us to discover the delusions of the patient, when he himself will give the examiner no satisfaction.

A departure from normal physiognomy will be portrayed—first, by an exaggeration of the intensity of expression; second, by an irregular or purposeless play of expression. Dr. Tuke has very ingeniously compared the countenance of a lunatic to the faces painted on children's blocks, two halves forming the picture of the face; the lower half having painted on it a laughing mouth, and the other a pair of serious eyes. Insane physiognomy is pictured by inconsistency of expression. Different emotions exist at the same time, and the features give the lie to each other.

The depressing emotions enter extensively into insanity, and are perhaps expressed the most constantly. In those forms occurring with ecstatic delusions, we will witness the display of the pleasurable emotions. The usual state of the physiognomy is indicative, however, of such emotions as melancholy, fear, terror, anger, pride, disdain, etc. The expressions of these several emotional states vary very little from the manner in which they should be exhibited by the sane individual. They are exaggerated and constant. The anger and rage of the lunatic lack the participation of intelligence that in the normal state furnishes, to some degree, the cause for the emotion. There is a purposeless glare in the eyes and compression of the lips, the upper lip being drawn up at the corners, so as expose the canine teeth. Drs. Darwin and Chrichton Browne have observed this. In melancholia, when the depressing emotions take possession, the intellectual expression may often be present; but the abnormality of the emotional changes is made clear by the want of expression of the eyes and the absence of cause for the existence of the emotions.

In the examination of every insane patient, we should observe the appearance of the different lines of the face and their depth or absence. The depression and *plicæ* of the skin of the face vary greatly in different forms and stages of mental disease.

In the beginning of insanity, where the emotional expressions are well developed and continuous, we may expect to see a deepening of all the lines of the face. In the secondary stage, however, of both melancholia and mania, these lines are, to some degree, obliterated, and there is swelling of the face and fullness of the lips. In the late chronic condition of these mental disorders, the lines are again somewhat deepened. In dementia there is hardly any evidence of expression, and this is more marked when we endeavor to arouse the patient's attention.

Age will play a great part in our diagnosis. In the child there is scarcely any evidence of emotional traces, while in advanced age the preponderating emotion of previous years will leave its impress. All men have some powerful emotion that is exercised, the first as evidence of their particular temperament. The grave, in after life, bear wrinkles of sadness; the gay bear traces of their evenness of temper. These natural expressions should not mislead the alienist in his examinations.

I do not wish to allude to the long list of varieties of monomania that various authorities have tabulated so often, and that are expressed by various preponderant emotional changes, for such subdivisions are anything but exact. Dr. Gray very sensibly remarked, in a recent lecture delivered at the Bellevue Hospital Medical College, that there was no case of so-called monomania with a constant delusion; but that delusions of all kinds occurred at different times in the progress of every well-marked case of mania or melancholia. This is undoubtedly true, and there are very few lunatics in whom suicidal, homicidal, religious, erotic, and other tendencies are always absent. Partial insanity is often difficult of detection by any change in the physiognomy. In mania there is a constant evidence of emotional excitement, and in the course of the disease all the

emotional changes are rung. At the same time the intellectual expressions may coëxist. The striking feature of mania is the marked changeableness and inconsistency of expression. There may be the fixed expression of some predominant emotion, a constant smirk or a glower of rage.

A strange condition of the hair has been alluded to by several writers. It has been called by Dickson *the electrical condition*. In occasional cases of chronic mania the hair literally stands on end, or is in a very bushy, curly, and dry condition, and not unlike the natural state of the hair of the natives of the Fejee Islands. This appearance resembles that following a charge of static electricity when the person is insulated. Drs. Dickson and Chrichton Browne have both published cases, pictures of which I will show you this evening. This condition is not associated necessarily with terror, but occurs during the paroxysm, with incoherent raving and destructive impulses.

Melancholia is more easily recognized by its physiognomical changes, rather than perhaps any other variety of insanity. The expressions are, for the most part, emotional; there is flaccidity of the muscles of the face, dullness of the eyes, drooping of the eyelids, eversion of the lips, and stagnant suffusion of the skin.

Dr. Tuke divides melancholia into two varieties. In one the emotional changes depend upon past occurrences; the second relates to a dread of the future, and the physiognomy expresses anxiety. A form of melancholia called by French writers mélancolie avec stupeur resembles dementia very closely. The countenance expresses absorbed thought or revery, and depends upon the fixation of the mind upon one strong delusion. The diagnosis of expression of this disorder from that of dementia may be based upon the following points: The depressing emotion is shown by a fixed and immovable cast of features, which rather implies the existence of a force. Dementia, on the contrary, is expressed by a relaxed condition of the muscles that is indicative of atony. The condition known as dementia, into which pass the greater number of hope-

less cases of mania and melancholia, is manifested by changes in the physiognomy that are usually very clear and not easy to mistake. In the earlier stages of the disease, that receives the name of primary dementia, the countenance indicates a lack of intelligence. The eyes are devoid of expression, and are incapable of reflecting any emotion. They often fill with tears without apparent cause, and a silly smile rests upon the lips. The whole appearance is apathetic. The want of comprehension is expressed upon the face of the demented, and there is nothing to indicate their intelligent appreciation of what is being said to them. The dementia of old age is expressed by the exaggeration of the dominant emotions of previous life. If the old man or woman have been characterized in early years by the display of either amiability or bad temper, the emotional signs of either of these states will be intensely marked in second childhood.

In secondary dementia the trace of the prominent emotion of the previous acute disease will remain. It may either be the sullen scowl, the look of fear and hatred, or the imbecilic smile.

Should the attention be aroused, the features will bear the impress of idiocy, no matter how little like a lunatic the individual may have appeared before. This is a strong point in the diagnosis from idiocy. In the latter the patient's *constant* facial expression is an unvarying index of his psychical state. The color of the skin of the face is generally normal, and we may diagnose the condition from melancholia; for, in the latter, the skin is dusky and muddy. Unless the emotion is of a strong kind, there will be but little display of exaggerated facial expression.

General paralysis of the insane may be recognized early by quivering of the lips, an occasional squint, and an irregularity in the size of the pupil. With these symptoms there is melancholia and depression, and later on there is dementia and immobility of expression. When the disease is well established, however, there are delusions generally of the agreeable kind, and the evidences of joy, pride, etc., are expressed.

There are diseases not distinctly of the insane type which may mislead the medical man in his diagnosis of the early stage of general paralysis. I refer to glosso-labio-pharyngeal paralysis. The defects in articulation will make the diagnosis clear, there being a marked difference in the character of both diseases. Later on, the paralysis of the facial muscles excludes this disease and removes all doubt.

The physiognomy of epilepsy, when it has been of long standing, is very striking. I will show you to-night a picture of a confirmed case. The lines in the face have disappeared; the eyes are dull and expressionless; the lower lip is full and everted; the hair is coarse and stands on end, and the complexion is leaden and dull. I have witnessed these appearances in a great number of cases. The patients that most commonly express this termination of the disease suffer from the variety known as *petit mal.*

ECLECTIC DEPARTMENT.

"Carpere et colligere."

ART. I.—THE PRESENT STATUS OF ELECTRICITY IN MEDICINE. By WILLIAM F. HUTCHINSON, A. M., M. D., Fellow Rhode Island Medical Society; Member Minnesota State Medical Society, etc., Providence, R. I.

Gentlemen,—It is my purpose to-day to bring to your notice some facts relative to the status which electricity has assumed in therapeutics, avoiding any historical reminiscences or statements, and speaking only of its recognized and settled effects in the medical treatment of disease. From the very limited time allowed me, scarcely more than a résumé of the more important points can be given; and even these must be touched cursorily, and as rapidly as the case will permit. Very many monographs have recently started out upon their mission of

teaching, but are, for the great majority of general practitioners, either unintelligible or useless; since they refer to instruments only partially understood, treat of a therapeutic force at once subtile, powerful and mysterious; and because it is difficult to convey an idea distinctly which is scarcely yet thoroughly formed, and is without sufficient foundation in fact to warrant the erection of a very elaborate superstructure.

Some few things, however, we do know, and of these I shall endeavor to speak.

Just now most physicians are fully convinced of the surgical value of electricity in certain cases where knife operations are inadvisable or inadmissible, or where enfeebled vitality imperatively demands conservation of blood and nerve power; but comparatively few are satisfied of its curative influence in non-surgical disease.

Perhaps few instances of its successful use have been brought to their notice; perhaps their own efforts in this line have failed; it may be they have been disgusted by the impudent assertions of charlatans, or, most probably of all, they have never given either thought or attention to the subject. Where they have essayed its application, the erroneous idea has obtained, that sufficient may be learned in the application of this potent remedy from the pamphlet usually accompanying the common form of the Faradic electric machine, wherein is laid down a series of instructions just how, when and where to use electricity in every conceivable disease. After a few of these ill-directed efforts, with other duties pressing upon him, and noting the absolute barrenness of result, it is not surprising that the busy, tired doctor closes the instrument and returns to drugs, with a strong commentary upon the wisdom of conservatism in medicine. But, gentlemen, it is not thus that you can possibly test anything—least of all, a force of the laws of which we know very little, and of whose possible effects nothing. The element we would subjugate is too vast in power, too unmanageable in its might, and too swift in action, to be dismissed so summarily, or to be dismissed at all. For the world

moves; and when we chat across the seas by lightning, and use it to destroy life in battle conflict, we may not, in justice to our patients, avoid its use in a beneficial direction, if it can be controlled to relieve pain and cure disease.

But the instruments required for its evolution and control are costly, numerous, and require considerable skill in handling to permit them to show forth their utmost power, thereby practically limiting their application to a small band of specialists, who will carefully study them in the light of experiment, with selected cases, thus producing the best possible results with a force so slightly known.

Time will, however, change this, and the day will come, I believe, when every practitioner will use some form of electricity as cheaply, surely, and familiarly as he now does his hypodermic syringe.

Dr. Nelligan, in his work, used language which has, it is to be feared, hitherto represented the views of the Profession at large upon this subject. He says: "The different forms of electricity may be indifferently applied." And again: "I regard the stimulant action of electricity, so to speak, as its active principle." How small the experience which dictates so dogmatic a statement, thousands of facts in practice and in print arise to illustrate. Medical electricity is both a science and an art; and it is only where a thorough knowledge of both are combined with a well selected class of cases, with proper instruments, and with correct sanitary regulations, that good results can be attained. It is no doubt true that empirics have in many cases succeeded in accomplishing much, but it is only where they do succeed that they are ever heard of, entire silence being strictly observed in the vast army of those who have not been benefited or who have received positive injury at their hands.

FORMS OF ELECTRICITY IN MEDICAL USE.

The forms of electricity in medical use are the Franklinic, static or frictional—the galvanic, continuous, battery or con-

stant current—and the Faradic, induced, electro-magnetic or coil current. All these names represent but three distinct forms of the agent, acquiring their differences in title at the will of the user. The first is usually produced by what is known as the plate machine, consisting of a glass wheel or cylinder revolving in contact with rubbers, and is the direct result of friction, causing an electrical disturbance of the materials employed, one result of which is collected upon a conductor, or in a receiver, and then used. It is employed in three ways—by drawing sparks from the affected parts; by general electrization, placing the patient upon an insulated stool and charging him full of electricity, or by immersing him in an insulated bath, through the water of which the fluid passes. It is surprising what simple charging the patient will do in certain diseases, and this without the smallest inconvenience to him whatever. I have known in obstinate cases of tic doloureux the pain completely removed in a few seconds, and the majority of unpleasant sensations dependent upon weak innervation may be removed by this plan.

The second form of electricity employed is what is variously termed Galvanism, the continuous or constant current, and the battery current. Where used with a rhotome it is, singularly enough, called the interrupted, continuous current. The essential features of this form of electricity are, that it arises from chemical decomposition, that it is of small intensity, but of considerable quantity, terms to be presently defined; and that its effects are of two kinds, chemical, by what is known as electrolysis, and thermic, as illustrated by the galvano-cautery. The form of battery evolving this current is of prime importance, it being necessary to have an even flow, easily controlled as to amount, and capable of being produced for a long time without change. Being the result of chemical action, it follows that the parts of the battery must be frequently renewed, and it is therefore found better in practice to have a great number of cells working slowly, each contributing a small amount to the total, and lasting a long time, than vigor-

ous action by a small number of large size. It must be understood that I now refer to a medical battery only—as for surgical purposes exactly the reverse qualities are demanded. Such a one is found in the Siemens & Halske cell, as arranged by the Galvano Faradic Manufacturing Company of New York. By the terms intensity and quantity are meant separate qualities or effects of the form of electricity now under consideration, it being the only one capable of evolving both.

The quantity of electricity circulating through a resisting medium, a wire, for example, is directly proportioned to the surface of the galvanic pair or pairs, and to the degree of chemical affinity existing between the different substances composing the battery, while the intensity is dependent upon the number of pairs employed and the size of the wire. This may be illustrated by supposing a pipe of three inches in diameter through which is pouring a current of compressible fluid filling the tube. Now, so long as there is no change in the diameter of the pipe the fluid remains the same; but if the pipe be reduced one-half, the density or intensity of the current must be increased in the same ratio, to allow the same amount to pass. It is this increase which is termed intensity. Another parallel may be drawn between the slow motion of the great Rodman cannon shot, with its enormous crushing power, and the velocity of the Minnie bullet, with its deep penetration. The cloud and earth currents or lightning are of fearful intensity, but of low quantity, while the galvano-causty pile has a very small intensity, but quantity sufficient to ignite a wire of platina. When the galvanic current is sufficiently weak, there is little or no pain accompanying its use, the only sensation being a gentle warmth between the two poles, gradually extending itself through the entire nervous system, arousing natural action, increasing diminished and augmenting decreased impressibility, until a new state takes the place of the old, until the sick nerves and muscles regain tonicity and health, or are placed in a condition to be favorably acted upon by medicines.

The third form of electricity is known as faradism, induced

—electro-magnetism or the coil current—all these terms signifying that form of electricity of which Faraday was the great exponent. It is of very high tension, scarcely any chemical action, and possesses no heating power; but under ordinary circumstances it produces marked contraction of muscle fibre, and a powerful action upon both sensory and motor nerves. In the instruments usually employed to furnish this form of electricity, advantage is taken of the well-known Faradic law of induction, to have three differing currents from the same battery. From this law, which states that a primary current passing through a spiral wire induces another in a second spiral surrounding the first of higher tension and moving in a different direction, has arisen a great variety of instruments on both continents, all of which are excellent in their way, only differing in minor points of fineness and evenness of current. For the ideal battery of this class, it is necessary to have a secondary coil of wire of very considerable length; the one I am using daily measuring more than two miles, of great fineness, since the current derived from so large a surface must be more even, of greater intensity and divisible into a greater number of degrees of power, than that from a smaller, ascending and descending the scale, by almost imperceptible stages, thus varying the effects of the application without any sudden shock to the patient. Advantage is here taken of the resisting power of different media, to interpose or intercalate, as it is technically termed, in the circuit, sections of iron wire, columns of water or any other substance the resistance of which is known and can be accurately measured. This appliance upon a battery is termed a rheostat, and is of incalculable value in making powerful applications to the nerve centres, where no part of the treatment is ever dreaded except the shock attendant upon the sudden and incautious opening or closing of the circuit, which, by the use of the rheostat is absolutely avoided.

VALUE OF ELECTRICITY.

Medical electricity is valuable for two purposes; first as an

aid to diagnosis, and second as a method of treatment. In the first instance it is often over-estimated. For example, in examining a patient supposed to be suffering from paralysis, upon detecting a well-marked difference in the action of a test current of faradic electricity upon different limbs, we arrive at once at the conclusion, regardless of the patient's own statements, that there is some derangement. But this is by no means sufficient, since grave lesions may exist unrevealed by the faradic current which are promptly shown by the galvanic; or may remain undiscovered by either, only appearing by the light of other symptoms. Only when all the clinical facts in a case are carefully considered, with the advantage of a selected class of cases, and in the hands of an expert, can a delicate electric test have any special value. Then, however, it is well nigh final, and has been the means of discovering various impostures, as well as of proving the existence of real disease where malingering was claimed.

AS A MEANS OF DIAGNOSIS.

In using electricity as a means of diagnosis, it becomes necessary carefully to differentiate between employing a current which shall show the amount of irritability in a muscle, this being a test, and one which shall show only the force of contraction, which is no test at all. When then we find that a muscle has lost electric irritability it is separated from the influence of the cord by destruction of its nerves, or by structural disease of the cord at the origin of the nerve. The degree of loss or diminution of sensibility to the test may vary, but it varies directly in proportion to either the amount of interference between the cord and muscle, or to the degree of damage done to the cord itself. There are cases in which people frighten themselves into a condition of loss of power from ideal influence, and here, if there is no difference between the muscles of the two sides, you are justified in assuming that the disease is feigned. Dr. Beard has recently attempted to use a powerful faradic current in this way up among the Vermont

ghosts, where he went to investigate certain curious phenomena which were making old ladies shiver and young ones grow pale over the entire ghost-story loving community. He reasoned that if a current was used so strong that no human being could hold the poles without the most violent muscle agitation, and the spirits could handle them quietly, there would be one mark in favor of the media. But the spirits were too cunning for the doctor, and while they announced their readiness to hold the sponges, kept very cautiously far enough away from them in the darkned room to receive no harm, and so the test failed.

This same action of the muscles under electrical stimulus, and irrespective of will, is a valuable differential test between actual structural disease of the spinal cord and simple impaired nutrition. For, when the contractility of a paralyzed muscle under the applied stimulus remains normal, the normal relationship to the cord is necessarily maintained. The brain may be altered in structure or in function, but the nerve supplying the muscle, together with that portion of the cord from which the nerve is sent forth, must still retain its normal functions. When this contractile response becomes increased, it can only be due to increasad vascularity in nerve centres, and if diminished, is due to one of a few causes, not difficult to distinguish between.

If, also, it be found that a certain number of applications are given without any improvement, it is probable that structural change has occurred in the cord, and that no treatment can avail; while steady advance almost certainly marks peripheral in place of central lesion, functual derangement rather than organic disease of the cord. When the nerve function is destroyed between the cord and the muscle in question, by injury or disease, the result is that the muscle has lost its powers through simple disuse, or through actual disease; in the latter instance it is beyond complete restoration, in the former this may be confidently looked for, and a few applications of electricity will determine this point, by present or lost electric response. Again, loss of contractility is sometimes due to a

change in muscular tissue occurring primarily; as for instance in certain cases of rheumatic paralysis and muscular palsy, the result of blood poisoning. This form of disease may be very closely diagnosed by observing the differing sensibility of the muscles to the faradaic and galvanic currents. Where the contractility is alike to both, it is out of the question that merely functional paralysis exists, there must be central lesion, the former incurable, the latter rapidly yielding to treatment. Lastly, electric contractility is diminished by certain changes in the blood, such as anæmia, chlorosis, and poisoning by opium, conditions surely improved by proper medical treatment.

DIFFERING EFFECTS IN DIFFERENT PERSONS.

The nervous system, as a whole, is widely different as to its action under electrical stimulus. In one person such degree of power as will scarcely contract the smallest muscle is borne with great difficulty, causing not only violent agitation and considerable pain, but a curious depression of the nervous system, from which the subject rallies slowly. In one instance occurring lately, where I wished to apply a very mild faradic current to the throat for the relief of hysterical aphonia, a condition promptly relieved by electrical stimulus, I was compelled to desist after three attempts, on account of this rare and singular effect. The patient, a young lady of exceptional culture and resolute will, knowing that no pain ought to follow such an application, tried her utmost to continue it, but the result was so harmful that it was at once stopped, and change of climate ordered. Such cases are extremely exceptional. In another class, the effect of the currents is not only promptly curative, but actually pleasurable, the gentle stimulus reviving dulled sensation and arousing new action, so that the patient arises from the sitting feeling renewed vigor and capacity for enjoyment. Of course it is necessary carefully to study idiosyncrasies of temperament, to be prepared to change the quality and quantity of current employed, and to recognize early the fact that the electricity is only

valuable where there is no physiological reason for its avoidance. The day scarcely passes when the specialist is not called upon to apply this agent in cases which would seem absurd were it not for the blind faith professed and shown in its curative virtues; and the disappointment exhibited by some who are dismissed as unfit subjects is often ludicrous in its expression.

In pursuing a systematic course of electro-therapy, it must be borne in mind that there are certain cases wherein a cure may be confidently and quickly looked for; as, for instance, in aphonia, hysterical, or dependent upon functional paralysis of one or both vocal cords; or where nerve pain is the prominent symptom. No one can fully appreciate the magic power of electricity who has not seen the agony of fifth pair or sciatica neuralgia melt away and vanish before the gentle warmth of the constant current, who has not watched the deep wrinkles of distress smooth down into content, and listened to the heart-felt sigh of relief as the unwelcome pang is dismissed; seemingly exorcised by the power of lightning, and almost with its rapidity.

By persistent effort paralysis may be removed, or the conductivity of the nerves may be so stimulated and revived as to permit the usual agencies of rest, time and medicine to do their work in curing this disease. Increasing atrophy, the terrible progressive muscular atrophy of the text-books, and the essential paralysis of children, where wasting of muscle tissue is a main symptom, may be arrested in its advance, and thus, although as yet powerless to cure, time may be gained for other agencies to be given and opportunity to act.

Through the influence of galvanism upon the vaso-motor system, there can be no longer doubt that the arterioles of the cerebral tissue can be stimulated to contract, where they are so distended as to render an apoplectic effusion imminent, and thus avoid one of the most serious accidents that can befall humanity. I have at present a patient in whose eye the retinal arteries can be plainly seen to dilate and contract as the

circuit is opened or closed upon the vertex, giving at the time of closure an immediate relief from the sense of giddiness, which usually causes great annoyance.

Electricity has thus its positive side. But there are many cases where it can do no good, and where its use is attended with positive harm. Like all other forms of treatment, this has its limits, not yet sharply defined; and it is only when confined within these limits that it can attain any real diagnostic or therapeutic value whatever. The sooner that the popular idea of universal cure, so sedulously fostered by empirics, is lost, and the sooner that means of investigation are opened in this, as in other scientific specialties, so much the more rapidly may those boundaries be widened, as have been the domains of science generally.

VITAL EFFECTS OF ELECTRICITY.

The most prominent amongst the clinical effects of electricity are those which, from want of a better term, may fairly be called "vital," since they denote certain changes in organic structure, unexplainable by aught we know of physical cause, and appertaining to that mysterious agent we name vitality. They are manifested in the influence of electric currents over the inherent or acquired property in a structure which normally makes it subject to the will, by which a nerve, for instance, may be aroused as to its own proper function, where inactive, or restrained and quieted when action is excessive, or a muscle may be caused to oscillate from a state of most violent agitation to that of slow and steady alternate contraction and relaxation. The vascularity of the skin may be most powerfully acted upon by either of the three forms of electricity. It is not uncommon to see, in certain forms of paralysis, a bluish tinge upon the tips of the fingers, arising from a sluggish action. In many cases this may be removed, and may always be relieved, by the constant current bath; while a condition nearly approaching vesication may readily be produced by the electric scourge.

EFFECTS IN MAL-NUTRITION.

But it is in cases of mal-nutrition that the grand value of the specialty is observed. I have repeatedly seen patients suffering from a general depression of vital tone, in whom no organic disease could be detected, who were fast advancing towards dissolution from no definable cause, arouse into new life and activity under the tonic effects of electricity, and rapidly regain strength and health. Some want of tone in the sympathetic, some lack of vitality in the vaso-motor system must be at the bottom of this condition of things; but, so far as I know, no drug has yet been found which will directly act upon these wonderful ganglia, so as to arouse them and restore their normal powers. One year ago a little girl was placed under my charge by Dr. George Mason, who had been for eight years a subject of the essential atrophic paralysis of infancy, which nearly always affects one limb, and in this case had expended itself upon the left leg. Atrophy, or rather want of symmetrical development, existed to such a degree that there was a difference of twelve inches in the circumference of the limbs, with of course, entire loss of motor power on the affected side. Treatment was directed to the sympathetics, as well as to the affected limb, and the result has been that the difference is reduced to four inches, with prospect of still further improvement. Here, the effect was clearly due to the electrical change in nutrition, and not to mechanical exercise of muscle fibre, as the continuous current was almost always used, and change from a low to a normal temperature has accompanied development of tissue.

THERAPEUTICAL EFFECTS.

The therapeutical effects of electricity next claim our attention. These have been alluded to in describing its diagnostic value, but are worthy of more extended notice. First among them comes its powerful effect upon nutrition, as seen in cases of anæmia—of nervous dyspepsia, of wasting paralysis, and in the discussion of tumors, and notably of dysmenorrhœa. In

the first group of cases, usually dependent upon a general lowering of nerve tone from some drain upon the vital functions, it is not enough to put an end to such drain; the vital powers have received a shock from which they are unable to rally unaided, and where the usual routine of stimulants and tonics utterly fail, until the sympathetic system is put in condition to be favorably acted upon by them. Here the galvanic current acts like magic, and the result is almost always good. The same effect obtains in the second class, ordinarily occurring amongst our busy merchants and professional men, whom press of business forbids to be regular at meals, compels to eat hurridly, and whose tastes become so perverted that noxious pastry and hot drinks are preferred to the plainer diet which an enfeebled stomach could more readily care for. In such cases, drugs fail to do their work, because they find no proper assimilative action to begin with, and here again, the effect of the galvanic current is prompt and permanent. In these it is found best to limit the application to the pneumogastrics and spinal cord, as involving the local stomach nerves most nearly. In the third group, where waste of tissue is combined with loss of motor power, the faradic current is to be employed—and a very striking instance of its effect has just occurred in my practice, in a patient sent me by my friend Dr. Perry. The sufferer, a young lady affected with lateral spinal sclerosis, had been for four years completely paralyzed as to the muscles of the neck, so that the head was as totally beyond her control as if it belonged to another person. They were diminished about one-half in size, were flaccid, and altogether useless. As a forlorn hope, Dr. Perry placed her under my care, scarcely looking for any favorable change. The faradic current was applied three times a week for four months, with the comfortable result of entirely restoring the vital tone of muscular fibre, of doubling the muscles in size, and of giving the girl as perfect will control over her head as she ever possessed. My friend, the doctor, was good enough to speak of the effect as "wonderful."

DISCUSSION OF TUMORS.

In the discussion of tumors, this agent may be employed in two or three ways, but always with the continuous current. It is most effective when the mass is benign, as in pelvic cellulitis, cystic or orchitic enlargements of the testicles, or in goitre; these affections having all been successfully treated by electricity. Where the tumor is of a malignant nature, long-continued treatment is frequently as efficacious as any form of surgical interference, and may be thoroughly relied upon to arrest development. In these cases, however, there is scarcely anything known, and time may or may not demonstrate the value of electricity over the methods of treatment now in vogue.

Within the past three months, several fibroids have been submitted to treatment by galvanism, with highly encouraging results. I have long been doubtful of the necessity of introducing needles into such tumors and attempting dissolution of the mass by powerful galvanic currents employed in this way, since the great density of the tissues precludes more than a small portion thereof being affected at once, and since, in my hands at least, abscesses have formed between the needles as the sole effect of such treatment. Two fibroids have been treated ineffectually by galvano-puncture, which afterwards yielded to and were removed by the process I am about to refer to, which may be called external electrolysis. One other, which was transferred to my charge seven weeks since by Dr. Clarence T. Gardner, an old anæmic uterine interstitial, almost as hard as bone, has, in that time, been reduced more than one-third by actual measurement, and the patient otherwise improved in health. The mode of application in this case will serve to illustrate the process usually adopted. A uterine electrode, carefully insulated up to within one and a half inches of a bulbous point, is introduced into the uterus as far as is possible, and connected with the negative pole of an intensity galvanic battery. The positive pole is attached to a sponge-covered disc, which is placed under the sacrum, and a current strong enough

to produce a distinct pricking sensation passed between them for at least thirty minutes daily. When the negative pole is withdrawn from the cavity of the uterus, it is always thickly coated with oxyde, which is harmless, the metal employed being iron. The result is slow chemical decomposition of the fibroid and energetic stimulation of the absorbents, whereby the mass is gradually removed. It is true that the process is long and slow; but, in the great majority of cases, patients prefer this to the more rapid action of the needles, even were such action effectual, which I doubt.

In the case above referred to, no other operative interference is possible, save the hypodermic use of ergotine, and even the most enthusiastic supporters of that plan of treatment confess its barrenness of result, when the tumor is not partially at least myomatous. In fact, the employment of galvano-puncture in solid masses like old fibroids, or, indeed, in enlargements of any kind where the texture of tissue is extremely dense, is to be avoided as worse than useless, and as capable of doing great harm. If any good can be attained at all by the action of galvanism in these tumors, it will be best attained, I believe, by the plan just described, which is absolutely harmless, and usually beneficial to general health.

It is only where the substance of the mass is partly or wholly fluid that galvano-puncture is permissible, and where its effects are so brilliant in curative result, as published records show. In hard tumors, where time is an object, I am of opinion that the knife operation is better than any plan yet proposed; but to many, especially to delicate women of strong nervous temperament, the idea of cutting is so repugnant that they are willing to submit to external electrolysis for any length of time, provided a favorable result may finally be reached; and this has been done in at least three cases.

FUNCTIONAL DERANGEMENTS OF THE BRAIN.

In functional diseases of the brain and spinal cord, such as cerebral or spinal congestion, cerebral or spinal anæmia, and

spinal irritability, I think I am speaking within bounds when I assert that the great majority of cases are directly curable by galvanism. It exercises an elective action upon these vascular structures, emptying them of blood when overcharged, and filling them when drained, as the direct or inverse current is used; it soothes the great nervous irritability attendant upon such derangements; it relieves promptly the insomnia produced by the same cause, and gives new tone to the enfeebled vaso-motor nerves. Case after case has gone away from a course of electrical treatment, so far restored to health as to allow the patient again to resume the same pernicious habits which led to the primary derangement, until it has become a matter of settled conviction in the minds of specialists that none must be despaired of.

EFFECT IN DYSMENORRHŒA.

In no single disease, however, has the beneficial influence of electricity been made more manifest than in one which appeals to the heart of almost every husband and father, who sees his beloved wife or daughter writhing under the recurring pangs of menstrual pain—pain which is nearly as keen as any to which we are subject. Dysmenorrhœa is, I regret to say, fast becoming the rule among American women of all nubile ages, and the female in whom the catamenial flow is regularly and painlessly established, is the rare exception. Nor does this periodically recurring suffering seem materially to affect general health, for they suffer like martyrs and make no sign. Were medical men to consider the immense quantities of stimulants and narcotics monthly consumed from this cause, and could they with confidence replace them with the harmless and ten times more potent remedy, galvanism, I can not think that they would hesitate. Of more than forty cases, incidentally or directly treated by me for acute dysmenorrhœa during the past winter, not one was unrelieved, and in more than two-thirds of the cases, the pain has not returned. Its rationalé I can not yet explain, but the fact stands, and I refer to my

friend, Dr. Nichols, of Washington, who has largely used electricity in this derangement, for corroboration of the statement that it is almost a specific therefor.

Should favorable opportunity arise, I beg that you will put it to the test, using the constant current in such wise that it may traverse the uterus in any direction.

Finally, gentlemen, in this as in all classes of scientific investigation not yet out of swaddling clothes, much indulgence must be granted. That many mistakes should be made before the darkness of ignorance be cleared up, is natural and certain; that much should be to-day asserted as fact which to-morrow's sun proclaims to be fiction, is but to repeat the trite history of all new scientific studies, and that the sanguine love and devotion of men who give their whole lives to one branch of our glorious Profession should lead them into many mistakes, is but human. Yet, before the day comes, the long twilight and the broad noon of certainty, can only be reached by stumbling through the pitfalls of experiment and trial. And, when the best is done and our end is so far attained as we may reach it, we have but placed in your hands a new weapon with which to fight our common enemy—disease and death—have only made an addition to the armamentarium of the general practitioner which shall add to the lustre of the name of the physician through darkened chambers and sick men's hearts.—*Monograph from the Author.*

ART. II.—ON PIGMENT FLAKES, PIGMENTARY PARTICLES, AND PIGMENT SCALES.

Dr. J. G. Richardson, Microscopist to the Pennsylvania Hospital, directs attention ("Philadelphia Medical Times") to what he conceives to be an egregious error, by which several microscopists of acknowledged ability have been ensnared—namely, a belief in the importance of the "pigment-cells" or "scales"

described by Frerichs of Berlin, as occurring in blood;* of similar bodies found by Drs. Meigs and Pepper of this city, under like circumstances;† and of the "pigmentary particles" or "celloids" figured by Dr. William Roberts, of Manchester, England;‡ all of which Dr. Richardson asserts to be simply and solely *accumulations of dirt* (especially the remains of red blood corpuscles) in the little excavations on slides in ordinary use.

The following experiment Dr. Richardson offers in evidence of his position:

"Examine an ordinary *plate*-glass slide microscopically for *dirt-pits* containing brownish-red matter, which may be oxyde of iron, or, if the slide has been long in use, old red corpuscles. If there are none already filled up with "pigment," rub in faithfully a little blood, by which means you can sometimes fill the shallow cavities with the débris of the red disks, and so imitate quickly the effect ordinarily produced in a gradual manner by frequently wiping small quantities of blood over the glass. Lastly, clean off the slide perfectly bright (so as to be sure you leave nothing but artificial *sells* upon it), and examine with a power of 250 diameters.

"The bodies you probably find are accurately described by Dr. Roberts,‖ as follows: "Pigmentary particles; these objects deserve a passing notice from the fact that they are frequent, almost constant, if not absolutely constant, objects in urinary deposits, and have not hitherto been described. * * * They never exist in such quantity as to form the entire (*sic*) of a visible urinary sediment; they are only to be recognized by the microscope. They appear especially under two conditions —namely, as free amorphous particles and cell-like bodies (or

* "Clinical Treatise on Diseases of the Liver." Sydenham Society Translation, London, 1860, vol. i., p. 320.

† "Pennsylvania Hospital Reports," Philadelphia, 1868, p. 108.

‡ "Urinary and Renal Diseases," second American Edition, Philadelphia, 1872, p. 125.

‖ Op. cit., p. 124 et sec.

celloids). * * * The cell-like particles have a peculiar appearance, very difficult to explain. They never present an unmistakably cellular character; they appear flat, never spherical. Their outline is generally an oblique ovoid. Within this outline, which is generally of exceeding delicacy and of definition, lie masses of red or orange pigment, exactly resembling the free amorphous particles already described."

"Frerichs, after pointing out similar objects, says* that accurate diagnosis can be made in malarial fever by examining the blood for them, since a few drops 'are sufficient to determine the presence or absence of large quantities of pigment.'"

"Drs. Meigs and Pepper report finding pigment particles in the blood of eighty-nine patients; but later, these acute observers seem to have had shrewd misgivings respecting their importance, although without feeling satisfied as to their real origin.

"My own suspicions were excited years ago by Frerich's pigment scales, and experiments on hundreds of specimens of blood from malarial and other cases convinced me of their delusive character.

"Very recently, Dr. James Tyson, of this city, whilst examining, in committee, some ovarian fluid, pointed out to me several of Robert's pigment flakes, and said he had prepared drawings of these bodies for his forthcoming work. His statement naturally led me to a careful and prolonged study of the objects in question, and this, in turn, forced upon me the conviction above expressed.

"Excluding carbon particles (from the air), I attribute the peculiar shape of pigment flakes, which Roberts finds so 'very difficult to explain,' to the conchoidal figure of the minute chipped-out cavities in plate glass; which little pits have, indeed, proved veritable pitfalls to unwary travelers over the microscopic field. These same shallow, shell-like excavations, before being filled up with dirt, are, probably, Frerich's 'coäg-

* Op. cit., p. 355.

ula, of a hyaline character, which resemble in form' (as they have a perfect right to do) the pigment flakes, and are also Roberts' 'bluish mother-of-pearl' celloids.

"Dr. Roberts concludes: 'I have been in the habit of noticing these objects for many years, and have regarded them as derivatives of hæmatin, but how they come to assume their peculiar forms I can not conjecture.' With him, I believe them to be 'derivatives of hæmatin,' but only by the *rubbing process* detailed above; and I trust that my 'conjecture' as to how these hæmatin flakes 'come to assume their peculiar forms' will be satisfactory."—*Monthly Abst. Med. Science.*

ANALYTICAL DEPARTMENT.

"Qui e nuce nucleum esse vult, frangit nucem."—PLAUTUS.

The Inventor of the Laryngoscope.—Most medical men are, we imagine, aware that, although more or less incomplete laryngoscopic examinations had previously been made in this country by use of mirrors devised by Babington, Liston, Avery, and others, Signor Garcia, the well-known professor of singing, was the first who brought laryngoscopy to a practical position, and who practiced autolaryngoscopy with the result of publishing at the Royal Society excellent Physiological Observations on the Human Voice, containing a good account of the action of the vocal cords during inspiration and vocalization. The observations of Garcia led to the further work of Türk and Czermak; and he must probably be considered as in no remote sense the principal author of the modern art of laryngoscopy—an unquestionably valuable resource in modern medicine and surgery. A committee has been formed, of which Lord Coleridge is chairman, and which includes many well-known names in science and art, and among the friends of both, for the purpose of raising a subscription with the object of presenting a

testimonial to Signor Garcia, "in special recognition of his claims as the inventor of the laryngoscope, and also as a mark of the high estimation in which he is held by all classes." Mr. George Critchett is the treasurer, and Dr. Morell Mackenzie honorary secretary, of the fund.—*Brit. Med. Jour.*

Execution of an Abortionist.—Alfred Heap, who was convicted of the murder of a young woman, in Manchester, by an unsuccessful attempt to procure abortion, was executed at Riverpool on the 19th of April last. He had prepared a written confession, which he desired should be published, but it is understood to implicate other persons. He did not deny the offence, but stated that he had no intention of causing death. This execution is one for which there are, we believe, few precedents; it is, nevertheless, one of which the justice is incontestable. It is stated that in other countries the offence is common, and the fatal consequences are usually concealed or slurred over when any public inquiry takes place. When the medical gentlemen who undertook part of the inquiry into the practice of baby-farming, conducted for the "British Medical Journal" a few years since, called upon one of the women who responded to our advertisement, she avowed the procuring of abortion to be part of her business in life, and showed her favorite implement suspended in the cupboard. It was nothing else than long iron wire. That traffic, as then conducted, was quashed by the revelations which were made in our columns; but the practice still exists apparently, and is carried on secretly by the most degraded and infamous persons. If we may trust what we read and hear of prevalent practices in other countries, the procuring of abortion is not yet there regarded with the detestation, or punished with the severity, which it merits.—*Ib.*

The Finances of the British Association.—The balance-sheet of the year has been presented and audited by the public accountants. The financial situation of the Association con-

tinues to improve. At the close of the year, every penny due was paid in cash, and there remains a handsome balance, as well as assets. After paying everything, deducting two hundred and twenty-five pounds for grants, one hundred and fifty pounds for the expenses of incorporation and other legal charges, and writing off several hundred pounds from old arrears, there still remained a respectable profit balance. When it is remembered that the whole operations of the Association are conducted on the basis of a subscription which does not exceed two-thirds of an ordinary subscription to one of our medical contemporaries, the results achieved by that subscription will appear very satisfactory.—*Ib.*

Diagnosis of Blood Corpuscles.—Dr. Woodward, in the "Americal Journal of the Medical Sciences" for January, 1875, comes to the conclusion that, if the microscopist, summoned as a scientific expert to examine a suspected blood stain, should succed in soaking out the corpuscles in such a way as to enable him to recognize them to be circular discs, and to measure them, and should then find that their diameter comes within the limits possible for human blood, his duty, in the present state of our knowledge, is clear. He must, of course, in his evidence, present the facts as actually observed; but he has no right to conclude his testimony without making it clearly understood, by both judge and jury, that blood from the dog and several other animals would give stains possessing the same properties, and that neither by the microscope, nor by any other means yet known to science, can the expert determine that a given stain is composed of human blood, and could not have been derived from any other source.

Action of Digitalis on the Evolution of Typhoid Fever.—Dr. Bernheim, Professor Agrégé at the Faculty of Medicine at Nancy, publishes ("Memoirs de Société de Médicine de Nancy," 1873) his conclusions on this subject. They are as follows:

1. The thermometric evolution of typhoid fever is compre-

hended in the following formula: Initial period from three to five days. Period of actual disease from one to two weeks; period of decline from six to eight days. In serious cases, a second irregular period commences about the middle of the third week.

2. Digitalis, when given in typhoid fever, lowers the temperature; producing either complete defervescence or remission.

3. The first effect of digitalis on the temperature shows itself two days after administration, the lowest temperature is obtained on the following day, sometimes only on the fourth day.

4. The lowering is generally progressive; sometimes it terminates by a more rapid fall. In some cases there is a very rapid fall in the interval between two thermometric observations, from the evening to the morning, or from the morning to the evening.

5. During the action of the digitalis, the temperature may rise again in the evening, often it is equal, or inferior to that of the morning. Defervescence, or the greatest remission, may occur in the evening.

6. This defervescence, or greatest remission, lasts from a few hours to three days, the temperature then rises. In about two-thirds of the cases, it no longer rises to the same height as before the administration of the digitalis.

7. The action of the digitalis on the thermometric evolution of typhoid fever may be thus expressed, the temperature is lowered. Taking into account the descent, the minimum, and the reäscent, it may be said that the duration of the influence on the temperature varies from three to twelve days, the average being seven days. In two-thirds of the cases, the thermometer never reaches the original point.

8. The pulse generally falls gradually with the temperature; the temperature rarely falls before the pulse, or the pulse before the temperature.

9. It is very rarely that either the pulse or the temperature is alone influenced.

10. The pulse and the temperature fall together, but not in

a parallel manner. Sometimes the pulse is lowered at night, whilst the temperature still undergoes the evening exacerbation.

11. After the reäscent of the temperature, the pulse generally remains low; it may even slacken still more, and attain its minimum several days later, even remaining slow during three weeks.

12. The lowering of the pulse varies from thirty to sixty pulsations. In the greater number of cases it falls below the normal.

13. The sphygmographic tracings undergo modifications through digitalis. Dicrotism between two pulsations appears on the line of descent. It rises again on that line. The pulse first becomes irregular, often reduplicate; then the line of descent becomes longer and more oblique, and tends to show a convexity above. These characteristics are explained by increase of tension and arterial tonicity.

14. Digitalis has never produced any unpleasant action on the nervous system nor on the digestive canal. The delirium often ceases or diminishes with the decrease of heat, and respiration is calmer. The intestinal hæmorrhage pointed out by Ferber as being probably produced by digitalis, does not appear in any case to have been due to this medicine.

15. The fever may evolve itself with a slackened pulse. The acceleration of the heart's action is not necessary to fever, it is a secondary phenomenon which appears due to the augmentation of the heat itself. In the tracings of pulse and temperature taken about the beginning of an attack of fever, the thermometric tracing rises before that of the pulse.

16. The slackening of the pulse obtained by digitalis is not the cause of the lowering of the temperature.

17. The physiological mechanism of the antipyretic action of digitalis is not explained. This action is at least partially independent of the heart and of the modifications of the arterial tension. Digitalis does not seem to act directly on organic combustion. A nerve poison and not a blood poison, it seems

to act on the nervous system, the regulator of the animal temperature, an apparatus which, on one side, directs the waste of caloric notably by the vaso-motor nerves, and on the other, regulated the production of caloric by special ways, yet unknown, but admitted by most physiologists.—*Lancet.*

Sir H. Thompson's Operations for Stone in the Adult.—Sir Henry Thompson compares, in the "Lancet," his last 100 cases of operation in the adult with Martineau's famous series of 84 cases with only 2 deaths. He has not included any patient below twenty-two years of age, at which there happens to be one. There are only four patients, including that one, below fifty years of age, while in Martineau's series of 84 there are not less than fifty-four below that age. Of the 100 cases, 65 are above sixty years of age (only twelve are above that age in Martineau's list), and the mean age of the entire 100 cases is not less than 63½ years (the mean of Martineau's entire adult series is under 47 years).

Ninety-six were adult males, four were adult females.

Of the 96 males, 87 were operated on by lithotrity and 9 by lateral lithotomy.

The mean age of the 87 operated on by lithotomy is 63½ years, the oldest being 83, the youngest 22, but only four were below 50 years.

The mean age of the 9 operated on by lithotomy was 63½ years also, their respective ages being 36, 59, 59, 61, 63, 70, 75 and 79.

Among the 87 operated on by lithotrity were 4 deaths, the ages were 61, 65, 66 and 81.

Among the 9 operated on by lithotomy were 2 deaths—viz., at 61 and 63.

Thus it will be seen that there was a total of 6 deaths in 96 patients, with a mean age of 63½, by the two operations.

Alluding to what has been termed a run of successful cases in practice, Sir H. Thompson observes that in this 100 there was one more remarkable than he has ever before heard of.

He had a succession of 51 elderly adult cases without a single death. They occurred between July, 1873, and June, 1874. These 51 cases (7 more than Martineau's entire series of all ages) had a mean age of 64 years.—*The Doctor.*

Iodoform in Granular Eyelids.—Although hardly connected with the subject of Dermatology, still we think that the following will interest our readers, especially as the treatment of granular eyelids is so unsatisfactory: Dr. Barber ("Detroit Review of Medicine") records a case in which every known remedy had been tried without success. "Seeing," he says, "in a medical journal an account of the successful treatment of an intractable ulcer of the leg with iodoform, the idea suggested itself that it might be 'good for sore eyes'; and he had twenty grains put in an ounce of glycerin, and applied some to the inner surface of the lids. In came the patient next day, with a sweet smile and a whitening cornea."

The patient got well without any drawback in a short time. Dr. Barber has tried the remedy in quite a number of cases since with very gratifying results.—*The Doctor.*

Japanese Leprosy.—Dr. Ashmead writes to the "Philadelphia Medical Times," as follows:

"There is one disease found here which I have never seen described in any medical work or journal; it is called "Japanese leprosy." I have been so fortunate as to see four cases—two very perfect ones. One, a man; forty years of age; married; a samourai, that is, a two-sworded retainer of a prince. He had suffered some six years; the symptoms gradually increasing until, when I saw him, he was covered with brownish mahogany-colored spots, not elevated above the surface, varying in size from an inch to four or five inches in diameter; these were distributed over the trunk and limbs. His face seemed entirely covered with this discoloration, some parts a lighter and some parts a darker shade. His legs were œdematous, as also was his face. The most astonishing peculiarity

of this eruption was an entire loss of sensibility in these spots, whilst outside of their circumference he had perfect sensibility. Another peculiarity was œdema of the eyelids, with inability to close them. On his attempting to do so, a space of a quarter of an inch separated them. Beneath and throughout the conjunctiva was a deposit of a brownish mahogany-colored pigment. This accumulation was greatest at the inner canthus. Another symptom, and, as the native physicians tell me, an infallible one in point of diagnosis, was entire loss of the eyebrows; giving the man a most curious expression. The hair of this patient's scalp had not come out, but in some cases it does so. The patient complained of no trouble elsewhere; no itching of the skin; urine high-colored, specific gravity normal. The only fault he had to find with his disease was the peculiar appearance it gave him, and the people in the public baths not liking to bathe with him. It is not a contagious disease. The skin on his face had a shining appearance, an important point in diagnosis. In the spots on his limbs I thrust needles to the bone without detecting the slightest sensibility; this, too, is diagnostic. The disease is hereditary, and considered incurable. I placed the man under treatment with cod-liver oil, iron, good food, beef, etc. He continued to improve slightly until an insurrection broke out in his province, Saga, when I lost sight of him.

The second case was very similar, with a few exceptions. In this case the eyebrows had not been entirely lost, his hair was coming out, and he had partial paralysis of lower limbs, also an endocardial murmur. I suppose this second case was complicated with "beri-beri." This case, too, I have lost sight of, owing to the Formosan trouble. He was placed under the same treatment, with digitalis added. I am sorry that I am unable to give you any further points on these cases, but hope soon in my hospital practice to study the disease fully. I would further state that case No. 1 said that the exciting cause in his case was hardship and unwholesome food during an insurrection.—*The Doctor.*

Treatment of Anal Vegetations.—M. Cruveilhier, of the Hôpital St. Louis, believes with the majority of surgeons that these sessile or pediculated vegetations are not dependent on the syphilitic virus, and that, therefore, internal treatment is not appropriate. They must be destroyed locally in a radical manner, for if a single one is allowed to remain, however small it may be, it will form the starting-point of new vegetations, which will multiply without measure. He has employed excision with curved scissors, followed or not by cauterization with diluted perchloride of iron. But he prefers a milder and often more efficacious remedy, pure chromic acid, which, applied to the small tumors, the healthy parts being protected, mummifies them and causes their decay. This caustic is less painful than nitric acid, or acid nitrate of mercury, and less often causes inflammation in the neighborhood. If these means fail, the operation of removal with the knife must be resorted to. —*Revue de Therap.*

CLINICAL RECORDS.

"Ex principiis, nascitur probabilitas: ex factis, vero veritas."

ART. I.—CASES OF DISEASE IN THE ORBIT. By HENRY D. NOYES, M. D., New York.

The following cases are offered for publication, because some of them are rare, and others are noteworthy because of special features. Almost all of them are cases of inflammatory action in various phases, and become interesting because of difficulty in diagnosis or of treatment. Tumors in the orbit are not extremely uncommon, and have been purposely omitted from the list, while pains have been taken to introduce cases which strongly resembled orbital tumors or their symptoms, that emphasis may be given to the fact, that oftentimes these two

classes of cases during their early history closely resemble each other.

It is only needful to call to mind the many tissues which fill the orbital cavity; the thinness of its bony walls; the diversified size and form of the cavities adjacent to it; the importance of the eyeball and the nearness of the brain to realize what perplexing questions in diagnosis may arise, and what gravity attaches to the subject of treatment. A perusal of the cases will illustrate the force of this remark.

I first offer the cases of simple inflammation in the orbital tissues, which did not result in suppuration, as is the usual event, and which for a time seemed like cases of tumor.

Exophthalmus—Cellulitis Orbital.—An infant, one week old, born without instrumental aid or prolonged labor, presented at birth a conspicuous prominence of the left eye. The pupil was natural, and there was in both eyes some conjunctival irritation. The eye stands fifteen mm. from the margin of orbit and six mm. in advance of the other. Movements free; pupil normal; anterior chamber normal; by ophthalmoscope, interior of eye healthy. The nerve has dark mahogany-colored edges; clear; no swelling; no growth within the eyeball. The fornix conjunctivæ everywhere œdematous and vascular; the axis of eye turned downward and outward. The lids, during sleep, stand about half an inch apart, and come together in crying. No bruit to be heard; no pulsation to be heard or felt; nothing abnormal in surrounding vessels. A reserved opinion expressed that a tumor might be present in the orbit. In about three weeks the eyeball had returned to its natural place in the orbit. There had been no suppuration or sign of disease, and the case must, therefore, be considered one of simple inflammatory œdema of the orbital tissues.

Cellulitis Orbital.—Master S., aged eleven, August 1867. Four weeks before I saw him he had pain in right orbital region for twelve hours, and this afterwards succeeded by swelling and redness of the eye, which continued at a maximum for ten days, and then began to subside. There is now exophthal-

mus to level of brow; upper and lower lids puffy; globe moves freely, turns out and upwards; has diplopia, and wears a shade to correct it; vision 20.20.

Ophthalmoscope shows nerve to be hyperæmic; veins turgid and twisted. In the other similar vascular condition, but not so decided. Has a fair look for a city boy; pale and slight built, but active. Can not distinctly feel tumor, or see it when the lids are widely separated; no pulsation or thirst; no abnormal state of exterior vessels.

August 27th.—Not so much protrusion. Div. = 40° area.

September 21st.—Tumor receded nearly to normal position. Div. = 35°; viz., left 20°, base 135°, right 15°, 0° single vision.

October 26th.—Able to unite double images with 8° base outwards, object at 6 inches = converging power of 8°!

Periostitis Orbital.—R. E. F., woman, aged thirty-three, came to the Infirmary on February 8, 1873, with the symptoms of severe purulent inflammation of left eye, which began five days before. There is swelling of lids, chemosis, and hyperæmia of conjunctiva; considerable puriform secretion; the cornea clear. The presence of patches of eruption on the temple and eyebrow led to the suggestion of the existence of secondary syphilis and to examination of the borders of the orbit, to see if there was any trouble there. Patient complained of severe pain around eye and in head, and this was accounted for by the extreme tenderness of the bony edge of the orbit when the finger was passed over it. It was noted that the degree of swelling of the upper lid was out of proportion to the conjunctival secretion. Instead, therefore, of calling the disease a conjunctivitis, it was more fitly pronounced periostitis, with conjunctival complications.

Treatment.—Three leeches were applied to the temple, iodide of potassium, grs. x., ter in die; sol. argent. nitrat., grs. x., ad. ℥j., applied to the everted conjunctiva twice daily, iced compresses kept on the eye; patient in bed. The symptoms abated during twelve days, to be renewed again with aggravation of

tenderness about the temple. Three more leeches were ordered and pot. iod. increased to forty-five grs. daily. The patient is in feeble health; is thin and anæmic; eats but little, and needs anodynes to sleep. On the eighteenth day from the beginning of the attack, the same trouble appeared in the other orbit, and showed itself first in swelling of the lid and conjunctival cul-de-sac, pain, sensitiveness of the orbital rim, and purulent secretion from conjunctiva. Leeches again used.

On the following day the pain increased to such an extent as to demand hypodermic injection of one-third grain of morphia and thirty grains hydrate of chloral. For fourteen hours patient was delirious, and the symptoms much aggravated at night. For three days matters grew worse, compelling the above dose of anodyne to be given every six hours, and the iodide of potassium was pushed to ten grains every two hours. Under this pressure iodism appeared, and the salt was for forty-eight hours discontinued. There was no sudden abatement of symptoms, but they gradually diminished. An examination of the urine was made while the high doses of iodide were being exhibited, and with almost negative results. There were no casts, nor blood, nor albumen, and of iodide of potassium there were 2.8 grains to the ounce; specific gravity 1013; reaction acid.

A remission of active symptoms occurred for a few days, and again delirium and pain appeared. Patient was taking forty grains of iodide daily, and with it forty grains of bromide of potassium, and mercurial inunction employed. Symptoms of iodism and of mercurialization came on, and the medicines were withdrawn. On the completion of a month, the attack was at an end, and after two weeks longer the patient was discharged. Some haziness overspread the cornea, but all other signs of trouble had departed.

There was never any evidence of gummy exudation in or around the orbit, nor was there perceptible exophthalmus; the inflammation did not appear to go beyond the state of hyperæ-

mia and serous effusion, while its influence upon the tissues of the eye and upon the brain gave it serious importance.

I have no doubt that the delirium, which lasted for several days, was due to extension of the inflammatory action of the meninges of the anterior frontal lobes. The treatment of the case was in the use of iodide of potassium somewhat heroic, and the effect obtained was not in proportion to the quantity of the remedy. An embarrassing circumstance was the wretched health of the patient, which forbade energetic leeching and unfitted her to bear the iodide of potassium. In reflecting upon the management of the case, I would suggest the propriety of making an incision into the periosteum, at an early stage of the attack, by a sharp-pointed bistoury; that is, to penetrate the upper lid above the levator muscle, and push the point back along the roof of the orbit on its middle line, and divide the periosteum by cutting against the bone. I do not see any anatomical objections to such a cut, and think it would relieve some of the pain. No important tissues need to be divided in this line of incision, because it is above and to the outer side of them.

An examination of the patient's general condition revealed undoubted evidences of secondary syphilis, and up to this time no new developments have come to my knowledge.

Exophthalmus—Abscess—Fistula of Orbit—Its Protracted Duration—Recovery.—Mrs. F., aged fifty-five, consulted me in January, 1873. She had been troubled for six months by attacks of swelling of the right upper lid, unattended with pains or secretion, but sometimes so great as to close the eye. The attacks made the eye feel weak and difficult to use. They happen once in ten or fiftteen days. On careful inspection, the right eye is found to be protruded from the orbit a distance of six millimetres beyond the fellow eye. Both globes are prominent, and the healthy one stands fourteen min. beyond the outer edge of the orbits. There is no tenderness under pressure on the globe, nor anywhere about the edge of the bone. Examination by the ophthalmoscope discovers nothing in the

optic nerve or the eye to throw light on the case. There is no tumor to be felt anywhere about the orbit. Gave iodide of potassium, grs. v., ter in die, and directed a small bag of ice to be applied over the eye for ten minutes three times daily. Considerable improvement ensued, and no attack of swelling took place for a period of four weeks; but during the latter part of March, headache over the right frontal region became great, constant, and troublesome. The pain was remarkably regular in its onset at 4 o'clock in the morning, and would last until 8 A. M. A small, prominent, and tender spot could now be felt by the finger at the upper and inner angle of the orbit.

During two weeks this swelling became larger, the lid grew œdematous, and the existence of an abscess was hardly doubtful. There was no increase in the protrusion of the globe. There was no fluctuation to be felt about the tumor, and to reach the pus the bistoury was entered to a depth of three-quarters of an inch, with an external incision of half an inch.

Upon careful exploration with probe, no signs of dead bone could be felt, nor was there ever any evidence of exfoliation. By the evacuation of the matter much relief was experienced, but the distressing headache was still troublesome, and was held in check by increasing the iodide of potassium to ten grs. ter in die. The discharge of pus gradually diminished, but could not be made to close completely. On the contrary, a sinus remained, giving vent to a watery, purulent fluid, and showed no inclination to heal for eighteen months.

During this long period the eyeball receded a little, there was freedom most of the time from headache, and the chief annoyance consisted in the dripping from the fistula, which made the lady unwilling to appear in society, and greatly marred her happiness. It was hoped that in time some fragment of bone would show itself, and on being removed that the fistula would close up.

In February, 1875, more than two years after being first consulted in this case, there was an aggravated return of headache, a greater amount of pus was discharged, and it was de-

termined to explore the cavity and find out why it refused to heal. The opening being dilated by laminaria and by a small sponge-tent, it was found that a probe, after entering a little distance, could be passed through the wall of the orbit into the frontal sinus. The hole in the bony wall was three-quarters of an inch behind the orbital edge, and though doubt was expressed by Dr. Markoe, who saw the case in consultation, as to the penetration of the frontal sinus, I found, on examining a series of skulls, that the frontal sinus will often be large enough to make this supposition correct. The size of the cavity varies greatly in different subjects, but naturally is greater in advanced life, and Mrs. F. was already beyond middle age. In no other direction could the probe be passed. Considerable reaction followed this exploration, and after it had subsided, injections of warm water were made daily, and on each occasion about one a and half drachms of pus brought out. The tinct. myrrh, diluted with six parts of water, was afterwards injected. A diminution of secretion occurred, and in a few weeks an injection of chromic acid, diluted so as to be of a very light color, was made and followed in a few days by an entire cessation of discharge.

In May, 1873, the track remained open, although no matter escaped. It was cauterized a few times with nit. argenti. It was also found, on further exploration, to extend downwards and inwards toward the nasal cavity, but no evidence could be found of communication with the nose. On examining the right nostril, a polypus was found on the top of the middle meatus. There was no obstruction in breathing through this side, no sense of fullness, and no catarrhal secretion. Nothing was done with the polypoid growth. The patient went to the country.

During the next few months the fistula contracted, and finally closed, and has remained well.

Remarks.—I regard this as a case of chronic orbital periostitis, which developed into an abscess, and the great depth of the abscess prevented the sufficient escape of the secre-

tion; hence an invasion of the surrounding tissues took place; an erosion of the bony walls, on the one hand, into the frontal bones, on the other side into the ethmoid cells. When thorough cleansing, by a suitable fine tube syringe, was made, the secretion soon began to diminish, and ceased under alterative effects of astringents. The polypoid growth in the nose was probably only a secondary effect of the abscess, and indicated the site in the nasal cavity at which the pus, if left to continue its burrowing, would have found an opening. The process of syringing was performed by a fine silver tube, intended for the lachrymo-nasal duct, to which, by rubber tubing, a two-ounce rubber syringe could be accurately fitted.

ORIGINAL CORRESPONDENCE.

"Sit mihi Fas scribere audita."

NEW YORK, May 27, 1875.

Prof. E. S. Gaillard:

Dear Sir,—Just at present, of course, the interests of the medical community is centered in the late learned deliberations at Louisville. Still, we have a few shining lights left at home, and certainly we could not but succeed in getting up a first-class "opposition show," when we have such a famous star actor as the illustrious ex-Surgeon General to bring before the public. In fact, the ex-Surgeon General is always something of a show himself, and, ever anxious to win new laurels to add to his renown, he had another opportunity on last Monday evening at the Neurological. On this occasion, the annual meeting of the Society, Dr. Hammond delivered the inaugural address on accepting its presidency for the second time, and took for his subject, "The Brain not the Sole Organ of the Mind." It was a carefully-prepared and suggestive paper,

evincing considerable study of the subject; but some of his conclusions will by no means be accepted by the mass of the Profession without further proof. As usual, whenever Dr. Hammond delivers his oracular opinions, there was an incessant scratching of reporters' pencils, and all the next morning's papers devoted more or less space to them; the "Times" and "Tribune" giving verbatim reports of the address. The following were some of the principal points advanced. He said, first, that there was no evidence to show that the mind can exist independently of the nervous system. After describing the structure and functions of the white and gray matter, and the size of the brain in comparison with the rest of the nervous system, in the different races of men and various orders of lower animals, he stated that for a number of years he had taught in his lectures the doctrine that wherever there is gray nerve tissue in action, then there is mind also. It is the gray tissue which originates mind; the white, as is well-known, serving only for the transmission of impressions and impulses. By the term mind, he understood a force developed by nervous action, and which has the same relation to gray nerve tissue that heat, light, or electricity have to chemical or mechanical action. All the manifestations of which the mind is capable in its fullest development were embraced in four groups—the perception, the intellect, the emotions, and the will; and any one of these could be exercised independently of the others. It was, however, clearly established that all mental processes have their origin in perception, whose office it is to place the individual in relation with external objects. He then went on to say that the spinal cord has been shown to possess the powers of perception and volition by many observations and experiments on the lower animals. Thus, a frog deprived of its brain would scratch its side when it was irritated, turn over when placed upon its back, and swim when put in water; a decapitated rattle-snake would often coil itself and spring, and the headless alligator perform even more complicated movements. After detailing with minuteness his own experiments on frogs,

from whom he had moved the entire brain, with the exception of the medulla oblongata (which he claimed as really a part of the cord), he concluded that the spinal cord is something more than a mere centre of reflex action and conveyor of impressions to and from the brain; being, in fact, a true centre of perception and volition. In some animals, such as the centipede and star-fish, there really seem to be several such centres; though this is denied by Dr. Carpenter. Neither is inborn instinct confined to the brain, as is shown by the fact that young ducks, which have never before been near the water, will begin to swim at once when put in it for the first time after having had their brains removed. Coming up to man now, we find that acephalous monsters are able to nurse and to cry, and that their eyes are impressed by light. Sims relates the case of one which lived for six months. In most of those recorded, the medulla oblongata was present, but some had no trace of nerve tissue above the *foramen magnum*. Dr. Hammond explained reading, walking, etc., while the mind is occupied with other matters, carrying on a conversation while playing on the piano, and all the phenomena of absent mindedness, revery, trance, and somnambulism, by what he called the *automatism* of the spinal cord, the brain being preoccupied or asleep. When the state of mental occupation has disappeared, there is no recollection of the acts which may have been performed. Memory resides in the brain, and can only take cognizance of these mental acts which spring from the brain, or of impressions which are made directly. Dr. Hammond concluded as follows: "I by no means contend that the spinal cord, to say nothing of the sympathetic systems, is in the normal condition of the animal body, as important a centre of mental influence as is the brain. The latter organ predominates—the very highest attributes of the mind come from it, and the cord is surbordinate when the brain is capable of acting. But it seems to me illogical to deny mental power to the spinal cord after a consideration of such experiments and other facts as I have brought forward, and hence we

are justified, I think, in concluding: "1. That of the mental faculties, perception and volition are seated in the spinal cord, as well as in the central ganglia. "2. That the cord is not probably capable of originating mental influence independently of sensorial impressions—a condition of the brain also till it has accumulated through the operations of the senses. "3. That as memory is not an attribute of the mental influence exerted by the spinal cord, it requires, unlike the brain, a new impression in order that the mental force may be produced."

Dr. T. Edwards Clark said that he was prepared to go a step further than Dr. Hammond, and, reasoning from the mental endowments of the lowest orders of animals, in which naturalists could find no trace of a nervous system, put forth the startling proposition that it might be true that the mind pervades not only the brain and spinal cord, but *the whole body.*

Dr. Parsons, Resident Physician at the City Lunatic Asylum, agreed in the main with Dr. Hammond, but thought he accepted too broad a definition of the term, mind. He took exceptions to the doctor's explanation of the automatic actions performed in absent mindedness, trance, etc., and thought them to be due to long habit, without the interference of the mind, though it was necessary that the higher cerebral centres should first educate the cord and the muscles dependent upon it to perform their functions naturally.

It is a little difficult to see the necessity for the existence in New York, overcrowded as it is with medical organizations, of a "Neurological Society" and a "Society of Neurology and Electrology." That we have two such societies, is due not so much to an all-devouring zeal for science on the part of their founders, as to personal and professional envy, discord and rivalry; and it would certainly be a happy consummation if the two could be consolidated, though at present there does not seem to be any prospect of this.

At the last meeting of the Obstetrical Society, placenta prævia formed the topic of discussion. Dr. Lee presented for Dr. Amway, of the Resident Staff at Charity Hospital, an

interesting specimen, consisting of the uterus and appendages of a woman who died from syncope a half hour after delivery, which had been effected by version, and previous to which she had lost an enormous quantity of blood. She was a negress, twenty-seven years of age, seven and a half months advanced in gestation, and who had already borne three children by natural labors. About the uterus was found more than a dozen fibroids, varying in size; some subperitoneal and some intra-mural, while the largest of all, quite the size of a hen's egg, was submucous, and projected into the cavity of the uterus.

Professor Peaslee said that he considered it very remarkable that, with the uterus in such a condition, pregnancy should go on at all, and that he should have thought it utterly impossible that it could exist for over seven months. Professor Jacobi thought the reason there had been placenta prævia in this case, was because the mucous membrane of the uterus had been in an abnormal condition on account of the presence of so many fibroids (at the time of fœcundation), and that the ovum had been obliged to travel almost to the os internum before it could find healthy membrane to imbed itself in. He asked if any gentleman present could give statistics showing a relation between uterine fibroids and placenta prævia. Professor Thomas replied that he knew of the existence of no such statistics. He could readily concieve how placenta prævia might thus be caused by the presence of fibroids, but personally he had never met with a case in which they existed. He was of the opinion that the placenta is never attached to the cervix, never extending below the os internum. Dr. Thomas now related a case which he had recently seen in consultation, and which he said he wished to make the basis of a few remarks on this subject, and particularly the prophylaxis of placenta prævia. He saw the patient, for the first time, at the end of the seventh month of pregnancy. During the past month she had had five severe hæmorrhages at intervals of about six days, and the last flooding was just over. He decided to induce premature labor; but instead of bringing it on at once, waited a few

days, in order that she might recover somewhat from the effects of the last hæmorrhage, by the use of proper stimulants and nourishment. Before another hæmorrhage occurred, he employed Barnes' dilators and delivered by podalic version. The child was still-born, but the mother made a good recovery without further accident. Version he considers one of the simplest of operations before the liquor amnii has escaped, but one of the most difficult in obstetrics, as well as often fraught with much danger, when the uterus was tightly contracting upon the body of the child. Yet even when most readily accomplished, the shock following the operation, when performed immediately after a severe loss of blood, was exceedingly apt to prove fatal. He mentioned one case in which he thought he had saved a patient's life by delivering the placenta (in order to stop a profuse hæmorrhage), and then leaving the child in situ for several days, the uterus in the meanwhile contracting so firmly that no more blood was lost. It was his invariable rule always to induce premature labor when the diagnosis is certainly made out, and especially since the operation can be performed so much more safely and easily than a few years ago. We are then not obliged to perform version immediately after a severe hæmorrhage, as we often are at full term, but can choose our own time, waiting till our patient is sufficiently recuperated to go through labor successfully. He never allowed but one patient with placenta prævia to go to full term, and that was the only mother he ever lost from it. In answer to a question by Dr. Reynolds, he said that he always used extra care and watchfulness in placenta prævia to guard against post-partum hæmorrhage. After delivery in these cases the body of the uterus might be firmly contracted, while the blood was pouring from the cervix. When hæmorrhage did occur, he first saw that the body was well contracted, and then applied per-sulphate of iron to the cervix. Dr. Jacobi considered that Dr. Thomas was not strictly correct in attributing death in placenta prævia to shock occasioned by the operation of version just after great loss of blood, and thought it would be more accu-

rate to say that it was due to fatal syncope, resulting from the anæmia of the brain caused by the sudden emptying of the uterus, which thus at once removed a considerable amount of pressure from the pelvic and abdominal blood vessels. Dr. Thomas then accepted this as the more probable explanation of the fact to which he had called attention.

Conium still continues to be somewhat talked and written about. At the last meeting of the Medico-Legal Society, Dr. A. N. Bell, of Brooklyn, editor of the "Sanitarian," who had been one of the coroner's jury in the Walker case, reviewed the same from a medical point of view. Nothing specially new in regard to it was developed, however, though his remarks, no doubt, served to further confirm the conviction in the public mind that no blame could possibly be attached to the physicians connected with the case.

At the April meeting of the County Medical Society, Dr. Edward Curtis, Professor of Materia Medica and Therapeutics at the College of Physicians and Surgeons, read a paper on "Conium and its use in Diseases of the Eye." It will be remembered that it was for a nervous affection of the eyelids principally that Dr. Agnew ordered the drug in Mr. Walker's case.

In a paper on Opium Poisoning, read before the Medical Library and Journal Association, April 23d, Dr. Andrew Smith called attention to the important point that, in exceptional cases, the most dangerous narcotism may exist, while the respiration is of normal, or nearly normal, frequency. In exhibiting the drug, therefore, we must not rely solely on the respiration as an index of its effects on the system. He also gave with minuteness the differential diagnosis between opium narcotism and apoplexy, uræmic coma and alcoholic intoxication. While on the treatment of poisoning by opium, he alluded to the fact that muscular contraction may be exhausted by the too free use of the galvanic battery, and the liability of such exhaustion to be mistaken for symptoms of increasing narcotism. He recommended oxygen gas as a very efficient agent

(in conjunction with artificial respiration, if necessary), by stimulating the capillary circulation and relieving the right side of the heart.

In speaking of the antagonistic effects of belladonna and its active principle, he quoted from a paper of Dr. Mary Putnam Jacobi, published in 1873, in which she anticipated the report of a special commission appointed in England, under the direction of Hughs Bennett. There were no other points of special interest in Dr. Smith's paper.

The annual meeting of that admirable Institution, the New York Asylum for Lying-in Women, on Marion street, occurred in the latter part of April. Dr. Stirling, for the Medical Board, reported 106 patients admitted during the year, and the total number who had received care, either at their homes or in the Asylum, 299. The Asylum had received $1,000 of the public funds from the Board of Apportionment, and the receipts altogether for the year amounted to nearly $3,000 more than the expenses; rather an unusual occurrence in such charitable institutions.

Mayor Wickham has just appointed Dr. Edward G. Janeway Health Commissioner, in place of Dr. Stephen Smith, whose term of service had expired, and the selection meets the general approval. Although a young man, he has already ably filled many positions of responsibility. In 1871 he was elected one of the visiting physicians to Bellevue Hospital, being at that time the youngest man that had ever received the appointment; and he is now one of the curators to the hospital, as well as Professor of Pathological and Practical Anatomy at Bellevue College. At the meeting of the Board of Health, on Tuesday, he was made chairman of the Sanitary Committee.

A few days ago the "Herald" published, under the caption, "Too Many Doctors," an account of the death of a child under such peculiar circumstances as to justify the coroner in taking cognizance of the case. It seems that Dr. Hugart, an irregular practitioner of some kind, was attending and prescribing for the child at the same time that a German apothecary was per-

forming a like office. Finally the child died; Dr. Hugart said from diphtheria; the apothecary from teething. The post-mortem subsequently made by Dr. Leo, Deputy Coroner, however, disclosed the fact that they were both wrong, the child having died from pneumonia, and not the slightest evidence of diphtheria being present. The above narrative very naturally excited the righteous indignation of that fiery war-horse, Dr. Stephen Rogers, and snuffing the battle from afar, he rushed furiously into print. After lauding the "Herald" for exposing this disgraceful affair, he says pertinently and truthfully: "Had it been 'too many doctors, such as they are,' it might have struck nearer the truth. It unearths two very great evils in this and other cities, which professional and legislative efforts have thus far failed to remove—viz., drug-shop practising by persons who rarely have the slightest knowledge of the symptoms of disease and its proper treatment; the other evil, the presence of indefinite numbers of persons, with and without diplomas, who are living upon the credulity and suffering of the people, but yet can not distinguish one from the other of the commonest diseases of the metropolis." He concluded by trusting that the coroner will thoroughly ventilate the whole abomination. These are admirable sentiments, but Dr. Rogers completely kills the effect by appending to his signature, "Late President of the New York Medico-Legal Society, etc., etc.," and giving, in addition, the street and number of his office. This, we must confess, smacks a little too much of the "tricks and manners" of the very quacks and charlatans whom he so strongly condemns. It seems still more reprehensible, when we find that the offices of Dr. Rogers and "Doctor" Hugart are on the same street, and only one block from each other, so that one can scarcely resist the conclusion that the former has seized this welcome opportunity to demolish a dangerous rival.

In the same issue of the "Herald," Hugart also comes out in a card (likewise accompanied by the full address), in which he explains that he was not called in, until the child was in a

dying condition, and that he learned from the family, as well as by examination, that it had sore throat, and therefore supposed diphtheria to be the cause of death.

We were all heartily glad to welcome the "American Medical Weekly" in its handsome new clothes. There is certainly evidence of a remarkably vigorous constitution where an infant is not only able to merely exist for so long a time, but also to thrive so lustily, and evince such precocious powers, while in a state of nudity. Most babies would have perished long ago, and especially in such a hard season as we have had.

Faithfully yours, STAR.

LONDON, ENG., May 25, 1875.

Prof. E. S. Gaillard:

Dear Sir,—Dr. Greenhow, in continuing his Croonian Lectures on Addison's Disease, analyzed twenty-one cases of bronzing of the skin without suprarenal disease, to show that these cases come under one or other of the heads before mentioned—e. g., dirty habits, syphilis, phthisis, liver disease, heart and lung disease, gout, yellow fever, ague, with enlargement of liver and spleen, and fatty degeneration of heart, liver, and kidneys, mania at climacteric period in women, internal cancer not involving the suprarenal bodies. He gave a detailed description of a case in Virchow's Archiv. for 1870. The lady, aged sixty-two, had suffered from excitement and sleeplessness aggravated by distress of mind, with symptoms of constitutional disturbance. She had suffered from violent pains in the epigastrium and right scapula, which had been hurt by a fall. The pains gradually surrounded the body with pain like that of herpetic neuralgia, which was worse at night. Then followed scleroderma with coëxtensive pigmentation, beginning on the right hand and arm and extending to other parts. The restlessness increased, and she became quite sleepless and deranged at night, her general health gave way, and she died in a short attack of pneumonia after nine hours' illness. The cerebellum was found soft, brain and lungs œdematous, some fatty de-

generation of heart, liver, and kidneys, but the suprarenal bodies and neighboring nerves were quite healthy. The pigment was deposited in the papillæ and upper layer of the cutis. The bronzing was, therefore, alien from that of Addison's disease, as were also the excitement and restlessness.

As to the allegation that suprarenal disease often exists without bronzing, he said that is quite true; but then the changes in the suprarenal bodies are not the characteristic ones. He remarked, incidentally, that cancer of the suprarenal bodies was always secondary. Of other diseases to which they are liable, he mentioned fatty or amyloid changes, cirrhosis with kidney disease, cysts, apoplexy, fatty, hyperplastic, and sarcomatous, tumors generally affecting one of the bodies only. These changes, he remarked, have nothing to do with the characteristic changes. Addison himself imported some extraneous cases into his memoir in spite of his caution that other pathological changes must be excluded. On the other hand, he believed that some cases recorded under other heads really belonged to suprarenal disease. Another prevalent misconception is that any abnormal condition of the suprarenal bodies is enough to raise the question of Addison's disease. Cases have been collected by Dr. Tuckwell and others to show the need of caution. He then quoted two cases at length; one by Dr. Wickham Legg, in St. Bartholomew's Hospital Reports, in whose patient there were some of the characteristic signs, debility, shortness of breath, occasional vomiting, and constipation, and who died of vomiting and exhaustion five weeks after admission. But he remarked, in this case there was a bilious tendency to account for the vomiting; there was fair appetite, great thirst, red fissured tongue, swollen spongy gums, and a high temperature. She lost four stone during her illness, an unprecedented circumstance in Addison's disease. The skin also was hard, dry, and warm, instead of soft and cool, and was not specially pigmented in the axilla or mammary areola. There was, however, no other apparent cause of illness and death. The other case is one related by Dr. Gilliam (United

States). The patient was aged forty-five, and suffered from gradually increasing debility, dyspnœa, and palpitation on exertion, loss of appetite and tendency to vomit, which increased till the patient died of exhaustion. But the suprarenal bodies were found healthy, while the gastric tubules were degenerated and atrophied. The comparative rarity of the disease is probably the cause of the errors.

We can not forbear remarking that Dr. Greenhow seems somewhat arbitrary in his classification. Addison's disease is, no doubt, a rare one. It presents a certain combination of phenomena, some of which are more constant than others, and it should be looked at in its totality. Dr. Greenhow has a perfect right to say this or that case is not a *typical* case of Addison's disease, but hardly to say that a case—as Dr. Legg's—which presented some trifling variations, shall not be considered a case of that disease. If we are not to call cases like his Addison's disease, into what limbo are we for the future to turn these unfortunate cases which, according to Dr. Greenhow, are to be, like Mr. Pickwick's shots at the partridges, "billeted nowhere?"

Dr. Lionel Beale, in continuing his Lumleian Lectures, said that a bacterium is composed of the simplest living matters; a mass of bioplasm with the outer layer somewhat hardened. On crushing a bacterium, the bioplasm escapes from the envelope, but still exhibits vital movements. These bacteria multiply by division, and vary in size from 1-3000 to less than 1-10000 of an inch. They develop from particles (presumably) too small to be seen, for they seem suddenly to come into sight in a space perfectly clear. The germs are found in air, water, soil in every part of the world, and retain their vitality at all times of the year. They are not destroyed by temperature which destroys every other organism. Dr. Bastian says living germs of bacteria are killed by a temperature of 160°; but others think they do not die at 212° F.; and in our last letter we mentioned that, according to the latest experiments, some only succumb to a temperature of 300°. These germs

exist also in the tissues, and even in the cells of many plants, in the tissues of many animals, as well as over all epidermic and epithelial structures, waiting apparently for pathological changes before they become active. Living matter is colorless and structureless, and that composing the highest organisms can not be distinguished from that of the lowest. Living matter is not essentially granular. When pure, it can only be distinguished from the surrounding fluid by its greater reflecting power. The differences between any fragment of albumen and any living particle are enormous, and no link between the two has been found. Living matter exhibits movements which are called vital, because, without them, the processes called life are inconceivable. These movements may be considered under four heads:

1. Vital movement may affect every part of a mass of living matter. These movements are undulating, and may be studied in the amœba, in epithelial cells, in white-blood cells, mucus and pus corpuscles. Dr. Beale believes that it is in movements like these in the little masses of bioplasm near the surface of the brain which are concerned in mental operations, and act on the delicate nerve fibres which are in contact with all parts of their surface.

2. Movement of the constituent particles of a living mass which takes place from centre to circumference. These can not be seen, but are implied by the appearance of a nucleus, and subsequently of a nucleolus within it. These centres of new growth are stained most deeply by carmine.

3. This is easily observed, and may be seen in any of the above-named objects; the bioplasm (nucleus) of the frog's red-blood corpuscle often divides into several parts and makes its way out of the cell into the liquor sanguinis, and in the amœba, mucus or pus cells, or white-blood cells, budding is easy to see; it can also be seen in the mycelium of fungi.

4. Movement from place to place. This may be observed in any leucocyte and during the growth of the fibrous tissue, and elastic, muscular, nervous, and some other tissues. In some

plants the bioplasm moves round within the cavity of the cell containing it, and deposits formed material in its journey. This may also be seen in the cells of the cartilage of the epiglottis. All these movements are peculiar to living matter, and none of them can be explained by physical laws.

Professor Lister remarks that in ischio-rectal abscess a piece of carbolic-oiled lint is better than a drainage tube, on account of the difficulty of retaining the latter. The tube (of soft caoutchouc, when it can be used) is most invaluable, and drains an abscess better through a small incision than a large incision without a tube does. The tubes should be pierced with holes, the size of which should vary according to circumstances. The best way to fix the tube is to pass a double silk through opposite edges, knotting the ends of each ligature and laying them on the skin, then the opening of the tube being level with the surface, the skeins will fix the tube by friction on the knots. When the tube is placed obliquely, its mouth should be cut obliquely, also so as to be level with the surface. The holes are liable to be plugged by granulations, but this is avoided by only perforating the deeper end of the tube, the sprouting granulations being confined to the superficial end. The tube need not be removed for the clearance of clotted blood, for the clot shrinks and leaves the passage free. After three or four days the tissues have become smooth around it, forming a passage into which it is easy to reïntroduce it. In very large deep wounds several small tubes are better than one large one. It is impossible to over-estimate the value of drainage tubes. Prof. Lister cautions disciples of antiseptic surgery against neglecting to immerse the knife with which they are operating in antiseptic lotion after every withdrawal from the antiseptic atmosphere of the carbolic spray. He relates an interesting case of ligature of the femoral artery for popliteal aneurism, in which not one drop of pus was secreted, carbolized gut was used for the ligature, and the cure was effected, though seventeen days after the operation the artery was felt pulsating down to the point of ligature, which, he thinks, under any other

treatment, would have led to fatal secondary hæmorrhage. His treatment depends much on the gradual shortening of the drainage tube, so that it may reach to the bottom of the wound without repressing or irritating the granulations at the bottom.

Dr. Roberts, of Manchester, has performed some experiments on the subject of biogenesis, from which he concludes that though organisms usually originate from persons, it is possible that they may originate de novo from lower substances. This is the position of pathologists with regard to contagious diseases. He found he could render decoction of turnip or beef tea sterile by boiling it in a flask, the neck of which was plugged with cotton wool, through which a tube bent in the form of the letter J was passed, the bend of the tube secured quite enough to prevent the entrance of germs even when it was quite open to the air, but on depressing the bent tube till fluid entered, bacteria were developed. The temperature necessary to destroy germs varies with the substance employed very widely, but for most substances 212° F. is enough to sterilize.

Respectfully, OCCASIONAL.

PROCEEDINGS OF SOCIETIES.

"Etsi non prosunt singula, juncta juvant."

CENTRAL KENTUCKY MEDICAL ASSOCIATION.

The Association met in Lancaster, Ky., on the 21st of April, 1875, at the usual hour, the President, Dr. R. W. Dunlap, in the chair. Present—Drs. Reid, Smith, U. S. A., McMurtry, Harlan, Cowan, Tucker, Nelson, Burdett, Frazer, H. Brown, Alcorn, Bailey, Craig, C. T. Spilman, Price, McKee, Welsh, Carpenter, Pettus, and Erwin.

The debate was opened by Dr. A. B. Nelson, of Danville, with an excellent paper on the Physiological and Thera-

peutical Action of Electricity, the question of the day. When Galvani, he said, published his immortal discovery, in 1791, of chemical electricity, it aroused great enthusiasm among scientific men, and some thought the next step would be a demonstration of the identity of electricity and life, and springing from this was the hope of many physicians that a genuine panacea had been discovered. The ancients were acquainted with frictional electricity, and also with the modifications of it, called vitreous or positive, and resinous or negative. All substances are conductors or non-conductors. Of the former, are metals, plants, animals, etc.; of the latter, are glass, sealing-wax, etc. Machines are constructed from which either positive or negative electricity may be collected at pleasure. The fluid, collected in a leyden jar, may be discharged through any part of the body by making the proper connections. Galvanic, Voltaic, or Dynamical electricity is that produced by chemical action. We may take as a typical battery one composed of two plates, one of zinc and one of copper, immersed in a jar of sulphuric acid. When the plates are connected, a current of electricity flows from the zinc to the copper in the acid, and from the copper to the zinc without. The wires connected with the plates are the poles; the one attached to the zinc being the positive, and the other the negative. By multiplying the pairs, any desired strength of current may be obtained.

There is yet another kind of electricity called Faradic, from its illustrious discoverer, and induced from the mode of its generation. It was observed by Faraday that a galvanic current passing along a wire induces in another wire, parallel to the first, a secondary current in an opposite direction. There are still other forms of electricity which, for want of time, he could not mention.

The most common modes of applying Franklinic electricity are these: 1st. The electric bath in which the patient is insulated, and connected with the prime conductor, or the cushion of an electric machine, according as the bath is to be

positive or negative. In this condition the patient is said to be charged. The second method is electrization by sparks, which is effected by presenting to the patient, while charged in the electric bath, some conductor, such as the hand. Third, the fluid may be passed through any part by means of the leyden jar. In using galvanism or faradism, localized or general electrization may be practiced. In the former, the current is passed through any particular part; in the latter, through the whole body. In the former, three general forms of electricity are employed; the electric hand, the metallic brush, and solid metals, and metals covered with sponges, etc., well moistened. When it is desired to affect the skin only, it and the electrode must be thoroughly dry; but to penetrate deeper tissues, the electrode must be moistened with a solution of salt in water. In the direct application, the electrode is placed over the muscle to be affected; in the indirect, it is applied to the nerve supplying the muscle. A current is called continuous when allowed to flow without interruption; it is interrupted when broken by removing one electrode, or by some form of current breaker.

Dr. Radcliffe's method of applying positive voltaic electricity was then described, and the general rules governing the applipication of electricity to the human body; after which, the subject of electro-therapeutics was discussed briefly, which he introduced by quoting the following sentence from Dr. Herbert Tibbits: "There is too much belief and too much unbelief in the therapeutic power of electricity."

Besides the local action of electricity, it produces general effects, especially upon nutrition; and, in addition to this, it may stimulate the secretions. It moreover acts as a stimulant to nerve and muscle. Electricity is especially successful in the treatment of diseases of the nervous system. One kind sometimes succeeds when another fails. Facial neuralgia and spasm, obstinate sciatica, hysterical aphonia, localized excessive sensibility, etc., were particularly amenable to franklinization.

The question of the differential use of the voltaic and faradic

currents is still *sub judice*. It is claimed that voltaism is specially adapted to the electrization of the nervous centres. In the alleviation of pain, galvanism is to be almost uniformly employed. One pole should be placed on the skin at the origin of the affected nerve, and the other over the painful spot or spots. Dr. Anstie quotes from Niemeyer two cases of trigeminal neuralgia of five and twenty-nine years' duration, respectively, in which the success was most striking. It has also been employed quite successfully in some forms of cutaneous anæsthesia and hyperæsthesia.

In the multiform varieties of paralysis, electricity probably has its most important application. In general, that form is used to which the muscles are most responsive. In the "essential paralysis of infancy," Duchenne advocates faradization, which is generally successful if applied early in the disease. In hemiplegia from cerebral disease, electricity should never be used under from four to six months, or danger may result. In all cases of paralysis, when testing the contractility of muscles, it should be remembered that they respond to a slowly interrupted current, when a rapid interruption will produce no effect. For this reason the galvanic current is often efficacious when the faradic fails. In paralysis from myelitis, electricity must not be passed through the cord while active mischief is going on. Localized electricity may, however, be used on the muscles to prevent wasting, till it can be applied through the cord.

Electricity has been used with greater or less success in the following affections: Progressive locomotor ataxy, spasm of certain muscles, poisoning by lead and mercury, local or partial paralysis of certain muscles from exposure to cold, and glosso-labio-laryngeal paralysis. In the hands of Duchenne and others, faradization has been of signal service in nervous deafness, cases of which existed from two to twenty years have been perfectly and permanently cured. Hysterical deafness, of many months' duration even, is usually removed after from two to six applications. The pains of muscular rheumatism are

almost invariably removed or alleviated by cutaneous faradization; and in chloroform narcosis, faradization of the phrenic nerve is of the highest value. If this does not give relief, cutaneous faradization of the præcordial region must be used.

The subject of electro-surgery was briefly discussed. Among the surgical diseases named, which have been treated by electricity, were difficulty of micturition, impotence, prolapsus ani from atony of the sphincter, discussion of tumors by electrolysis, club foot, hæmorrhoids, enlarged prostate, aneurism, ulcer, etc., etc.

In conclusion, he stated that his end would be accomplished if his paper should be the means of stimulating the general practitioner to make an experimental investigation of the subject. It is well remarked in Beard and Rockwell's work on Medical and Surgical Electricity, that "electricity has the great disadvantage on account of the necessary mechanical and technical difficulties in the way of its successful employment; it can not be rapidly popularized. * * * There is little doubt if it could be given in the form of pill or powder as successfully as it is now employed, its use would increase one thousand-fold." But electro-therapeutists, like other specialists, are inclined to "magnify their office" unduly, and to overestimate the difficulties surrounding this special territory, probably, sometimes, with the purpose of making it as inaccessible as possible to others, in order that their own glory and emolument may be enhanced thereby. Without doubt, the difficulties of electro-therapeutics have been greatly exaggerated, and for the encouragement of those who, engaged in general practice, may wish to avail themselves of the use of this remedy in the treatment of diseases, he quoted an extract from a review of Beard and Rockwell's work, which appeared in the "New York Medical Record" of March 28, 1875. The reviewer affirms, that "any sensible doctor of medicine can fit himself in a month's time, at most, to make all the applications of electricity as well as the so-called masters, and then proceed to build up a therapeutics of his own. Exclusive of those recorded under electro-

surgery, notes are given of 223 cases. Out of these, 29 are of hysteria and allied affections; and in all but two, general faradization and central galvanization were the remedies. The results in general were favorable, but there is certainly no science here, for hysteria interposes too many sources of error; and to the cases of various affections which follow, though the cures are sometimes remarkably brilliant, there seems to be little evidence of any special skill displayed in their treatment."

Dr. Harlan, of Danville, had listened with great interest to the admirable paper just read. The subject under consideration was imperfectly understood by the general practitioner, and had, therefore, he said, been neglected. He had seen happy results from the descending current in facial paralysis, and in a case of abortion, in which the gentleman who had just occupied the floor was associated with him, delivery was effected by Gaiffe's pocket battery, after various other means had failed.

Dr. Burdett, of Lancaster, thought with Drs. Beard and Rockwell, as quoted by Dr. N., if electrlcity could be given in pills and powders, it would be more generally and effectually employed. The great trouble, he said, in the therapeutical use of this agent, is the liability of batteries to get out of order and the inability of most physicians to keep them continuously in working condition. He did not have a very exalted opinion of electricity as a remedial agent.

Dr. Nelson remarked, that electricity was very efficacious in post-partum hæmorrhage. He could recommend Gaiffe's pocket-battery as a very simple, cheap and easily worked instrument.

Dr. Craig, of Stanford, had used electricity in a case of opium poisoning with marked benefit; the patient ultimately succumbed, however, being too deeply narcotized to rally.

Dr. Erwin, of Danville, said Dr. Nelson's paper was very complete and thorough, and very little else could be added to what he had already said. The subject is very interesting, and he believed that electricity would some day take high rank in therapeutics.

After a few remarks from the President on the value of electricity in the treatment of disease, and some complimentary allusions to the opening paper, the debate closed.

Dr. Price, of Harrodsburg, chairman of Section on Progress of Surgery, Anatomy, and Surgical Pathology, failed, through unavoidable circumstances, to make his report, and the committee was discharged. A strong desire being manifested among the members to hear this report, a motion that Dr. Price "read it at the next meeting as a voluntary paper," was unanimously adopted.

Dr. S. L. S. Smith, of Lancaster, read for Dr. Hoffman a report of a case of Complete Placenta Prævia, in which hæmorrhage was checked and delivery effected successfully by the tampon, after the plan recommended by Professor Henry Miller. The case was one of great peril, and called for prompt action. The vagina was pluged with cotton-wool and a compress and bandage applied. In three and a half hours the uterus manifested expulsive contraction, and the tampon was removed with no hæmorrhage. A finger was then insinuated above the anterior margin of the placenta and the membrane ruptured. The left shoulder was found presenting, when the patient was rapidly chloroformed, the placenta pressed backwards, and delivery accomplished by turning. The child was still-born.

Dr. Burdett had never had but one case of placentia prævia; he succeeded in delivering the child by grasping and firmly pressing the placenta to the left side.

Dr. Price thought the plan pursued by Dr. Hoffman the proper one to save the mother.

Dr. Nelson stated that Dr. Burdett's proceedure was the one recommended by Professor Penrose, of the University of Pennsylvania.

Dr. Burdett said the patient with a sessile tumor on the inner aspect of the forearm, presented at a former meeting, had, since then, sufferred no material change in her general condition. Her appetite was good, and she was seemingly in good

health. He had excised the tumor, and the exposed surface had been cauterized from time to time to prevent discharge. It is evidently spreading, and he thought the limb would eventually have to be amputated. The tumor was of the variety known as round-cell sarcoma. The patient was very refractory, and did very much as she pleased. There is but little pain.

Dr. Steele Bailey, of Stanford, read a report of a case of Otitis Media Hæmorrhagica. The patient, an adult male, in robust health, complained of intense pain in right ear, which had prevented sleep for thirty-six hours. Examination with Gruber's speculum and forehead mirror revealed hypertrophy of the membrane lining the drum cavity, the tympanic membrane thickened and apparently quite sunken. The hearing of the right ear was nil, but the left was normal. The pain was so acute that he was forced to take his bed. He had some coryza, and there was a sense of stuffiness about his nostrils, frequent expectoration of a glairy mucus and a congested pharynx. He never had any trouble with his ears before. Four leeches were applied to the tragus, followed by the instillation of sweet oil and McMunn's Elixir into the ear to quiet pain and relieve the catarrhal inflammation. The night following Dr. Bailey was summoned in haste, and found him free from pain, but in great nervous excitement, consequent upon a hæmorrhage from the affected ear amounting to about two teaspoonsful. The auditory canal was immediately syringed out, and by direct illumination a perforation—a little slit not larger than two lines—of the membrana tympani was discovered in the superior portion of the circle. No pus could be detected. The pain from this time ceased entirely, nor was there at any time a particle of suppuration. The treatment consisted in keeping the canal clean with the use, three times a day, of the eustachian catheter and Politzer's method of inflating the drum cavity. The rupture healed in twelve days, and hearing returned unimpaired.

Dr. McMurtry, of Danville, said the case was one of much interest. It should teach us the importance of giving more

attention to aural diseases; many of which could be successfully treated by the country practitioner that now find their way to the specialist. He could recommend the eustachian catheter as a valuable instrument in this class of diseases.

Dr. Harlan, of Danville, was in the habit of making patients close their mouths and nostrils and blow forcibly to open the eustachian tube, in imitation of Politzer's air-bag. Dr. Bailey's case was certainly very interesting and rare.

Dr. Cowan, of Danville, gave it as his experience, from a partial examination of the inmates of the Kentucky Institution for the Deaf and Dumb, that internal aural catarrh was not so frequently the cause of deaf mutism as he had been led to infer from such statements as those contained in Dr. Bailey's report and in the text-books on aural disease.

Dr. Craig, of Stanford, inquired what was the rationale of the treatment of perforation of the tympanic membrane by Politzer's air-bag. He said he understood its action when the membrane was sunken.

Dr. Cowan, of Danville, replied that the benefit, as in the case reported by Dr. Bailey, to be derived from the use of the Politzer air-bag, he supposed, was that it cleansed the eustachian tube of the mucus or blood clots that may have collected in it.

Dr. Bailey asked Dr. Cowan why these discharges could not pass into the throat by gravitation.

Dr. Cowan said that the tube was often impervious.

The Secretary read for Dr. H. Plummer, of Fleming county, a report of five cases of pneumonia of a severe type treated successfully by the ordinary means employed at the present day. In one case large doses of quinine were given.

Dr. McKee, of Danville, thought the success attending Dr. P.'s cases remarkable, especially as the treatment in no wise differed materially from that employed by other physicians. It is to be regretted, he said, that no thermometrical observations were mentioned. The disease had been very fatal during the past winter in this section. He had himself two well marked cases of gangrene of the lung following pneumonia,

and two other cases, the symptoms of which unmistakably indicated gangrene of the lung.

Dr. Cowan exhibited two of Barnes' uterine positors, and a uterine probe for fused nitrate of silver.

Dr. McMurtry stated that on a former occasion it had been his privilege to call the attention of the Association to those manifestations of life in the pregnant uterus by which, with limited precision, the sex, position, and presentation of the child might be determined; and that to-day he would invite the attention of the members to that wonderful process by which the almost microscopic ovule is developed into the living human form, hoping at some future occasion to complete the subject with a description of the manner in which the child is expelled from the cavity of the uterus. He said that through the courtesy of his friend, Dr. E. Souchon, of New Orleans, he was enabled to illustrate the subject by a series of drawings, which were the product of the skill and industry of that accomplished anatomist and dexterous surgeon.*

Beginning with the relative position of the internal organs of gestation, he described the minute anatomy of the ovary, illustrating the Graäfian vesicle at various stages of development, and explaining the relation of ovulation to menstruation. He then spoke of the fertilization of the ovum, its segmentation, and the manner in which it becomes attached to the uterine mucous membrane. Reference was made in this connection to extra-uterine pregnancy. After describing in detail the formation of the membranes on the part of the uterus and the fœtus, he gave an admirable demonstration of the fœtal circulation, directing special attention to the formation of the placenta, and its double function of respiration and nutrition. He concluded the demonstration with a description of the de-

* These drawings, fifty in number, and of large size, were made by hand, and splendidly executed in colors. Every step in the intricate process of human embryology was clearly delineated, as well as many varieties of abnormal placentæ, the fœtal circulation and the development of the various organs of the fœtus.

velopment of the organs of the fœtus, explaining at the same time certain inflammations resulting from imperfect development, as cleft palate spina-bifida, etc., etc.

During the progress of the demonstration the utmost attention and interest were manifested by the members, as the speaker went over, in his clear and animated manner, the successive steps of the complicated process.

At the close of the demonstration, on motion of Dr. Price, the thanks of the Association were unanimously voted Dr. McMurtry for this most interesting feature of the session.

Dr. S. L. S. Smith exhibited Beard and Rockwell on the Medical and Surgical uses of Electricity, and Cohen on Diseases of the Throat.

Dr. Tucker, of Danville, presented two tumors (scirrhus) removed from the same patient, and from the left side. One a mammary tumor, weight nine ounces; the other an axillary, weight eight ounces. The operation was performed on the 5th of the present month, in which he was assisted by Drs. Harlan, McKee, and Erwin. The axillary tumor was intimately connected with the important blood vessels and nerves of that region, making it a grave operation. Ether was used, as the patient had an unconquerable prejudice against chloroform. The hæmorrhage was insignificant, and the patient rallied well. The wound was dressed with carbolic acid lotion, and it healed by the first intention without any unfavorable symptoms. The patient, a lady, forty-eight years old, mother of several children, first noticed the tumors about two and a half years ago. They never gave any pain until a few weeks before the operation, when pressure of the axillary tumor on the brachial nerve kept up considerable pain. She had become considerably emaciated. Convalescence is now well established.

Dr. Huffman, of Lancaster, for Dr. Burdett, exhibited the lad with paralysis of the right side, presented by him at a former meeting. Since then he had recovered the use of his arm.

The Secretary announced the death of Dr. W. A. Eastland, member of the Association.

The election of delegates to the next meeting of the American Medical Association, to be held at Louisville, Ky., resulted as follows—viz.: Drs. A. D. Price, Steele Bailey, H. Brown, S. L. S. Smith, and Wm. B. Harlan.

Dr. McMurtry offered the following preamble and resolution, which were passed:

WHEREAS, The highly reprehensible practice on the part of some members of the Medical Profession of resorting to the columns of the secular Press in discussing medical subjects is becoming quite common; and since such instances as recently occurred in the neighboring town of Lebanon are attracting the attention of the Profession throughout the country, as indicated by the Medical Press; therefore, be it

Resolved, That this Association condemns such practice as unbecoming the dignity of the Profession, and in violation of the spirit and letter of the code of ethics of the American Medical Association.

The President announced the following members chairmen of the different Sections for the ensuing term:

Progress of Materia Medica, Therapeutics, Hygiene, and Chemistry—Dr. S. L. S. Smith, U. S. A., to report at the meeting in July, 1875.

Progress of Midwifery, Gynæcology, and Diseases of Children—Dr. P. W. Logan, to report October, 1875.

Progress of Medicine, Physiology, and Medical Pathology—Dr. Charles H. Spilman, to report January, 1876.

Progress of Surgery, Anatomy, and Surgical Pathology—Dr. Cowan, to report April, 1876.

After a vote of thanks to the Odd Fellows for the use of their Hall, and to the members from Garrard county for hospitalities, the Association adjourned, at 5 o'clock P. M., to meet in Harrodsburg on the third Wednesday in July next, when the debate will be opened by Dr. Steele Bailey, of Standford, on Bright's Disease.

GEORGE T. ERWIN, M. D.,
Permanent Secretary.

CHEMICAL AND PHARMACEUTICAL.

"Diruit, ædificat, mutat."—Hor.

Harmless Cosmetic Powders.—Mr. Hans M. Wilder, (*Amer. Jour. Pharm.*) announces the fact that the apothecaries of Copenhagen have agreed on the substitution of certain harmless compounds for the numerous poisonous face-powders now commonly used. In avoirdupois weight, the proportions of the ingredients will be about as follows: White powder—Oxide of zinc, 1 oz.; wheat starch, 9 ozs.; oil of rose, 3 drops. Red Powder—Carmine, 1 oz.; carbonate of magnesia, 4 ozs.

A Novelty in Mustard Plaster.—McKay's omphalic mustard plasters or leaflets, consist of disks about the size of a sixpence attached to small sheets of a light transparent material. These are four and a half inches by three and a half, and have each twenty spots. They are merely to be dipped in water and applied. By leaving them on for a longer or shorter time, any required amount of effect may be obtained, from a glow of redness to actual blistering. The spot principle, too, seems quite in accordance with Nature's efforts to relieve internal congestion and inflammation, as in the various rashes which from time to time appear on the body. The same principle has been applied to fly-blisters, which are made with spots of three sizes; the smaller ones, most recommended, being four-tenths of an inch in diameter, and eighty-five of them on a sheet six inches square. They occasion a crop of vesicles which appear in regular order, having intervals of unblistered skin between. What renders common blisters so painful is the denudation of a large continuous surface of the sensitive skin. The spot plan is said to entirely do away with this, leaving as it does the sound intervals. This also renders it easier to heal up a blister when the necessity for it has passed away.—*Exchange.*

Yerba Del Perro.—Still another candidate for medicinal honors has arisen in Paris to follow guarana, jaborandi, boldo, and the rest. M. Rabuteau lately presented to the "Societe

de Biologie a specimen of a Mexican plant known as Yerba del Perro—dog grass—and an account of some experiments he had made with it on animals. It appears to be highly poisonous, producing effects somewhat analogous to strychnine. Its administration occasions wide dilatation of the pupils, and, like jaborandi, it excites an enormous flow of saliva. The extract is very deliquescent. Eighty centigrammes (12 grains) injected into the veins of a medium-sized dog produced the following effects. There was nothing remarkable until an hour had passed; at the end of that time the dog barked a great deal, foamed very much at the mouth, and fell down in convulsions. These symptoms lasted during half an hour, when the animal died. The brain was congested, but not the spinal marrow; the lungs were in a normal state. This Yerba del Perro (dog-grass) belongs to the family of Compositæ; it has a woolly stem, and seems to be highly poisonous.—*New Remedies.*

New Method of Cauterizing.—Del Greco recommends, after applying nitrate of silver in the usual manner, to pass a small cylinder or pencil of polished zinc several times over the surface already whitened by the caustic. The parts immediately blacken and the cauterizing action becomes deeper.—*New Remedies.*

Remedy for Chronic Hoarseness.—In chronic hoarseness arising from thickening of the vocal cords and adjacent membrane, the ammoniated tincture of guiacum is often a very efficacious remedy. It may be mixed with equal parts of the syrup of senega, and a teaspoonful of the mixture given two or three times daily.—*Exchange.*

Artificial Winter-Green Oil.—Oil of gaultheria is nearly pure salicylate of methyl, and by combining artificial salicylic acid, produced by the destructive distillation of wood, with artificial methyl, produced by the destructive distillation of coal, a compound is obtained which is almost identical in flavor with oil of winter-green.

Vaseline.—This new product of petroleum to which this name has been given, promises to come into use as a vehicle for various emollient preparations, for which it appears to possess some peculiar advantages. It is a solid semi-transparent jelly, and free from taste or odor, and it is said to undergo no change by keeping. · It becomes liquid at a temperature of 93° Fah. The manufacturers state that it is prepared simply by the evaporation of crude petroleum and filtering the residue through animal charcoal.—*Exchange.*

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

"Judex damnatur cum nocens absolvitur."

Believing that most physicians are as much interested in learning the titles of monographs, with the addresses of their authors, as they are in reading reviews of current medical works, the space for the Review Department in this number is surrendered for the purpose of furnishing this information. Of the large number of monographs received lately, the titles of some of the most interesting are as follows; other monographs will be indicated hereafter:

STATISTICS OF MORTALITY FROM PULMONARY PHTHISIS IN THE UNITED STATES AND EUROPE. Compiled from Official Health Reports and from Data obtained from Life Insurance Companies. By WM. GLEITSMANN, M. D., of Baltimore, Md. Baltimore: Turnbull Brothers. 1875.

ATMOSPHERIC ELECTRICITY AND OZONE; their Relation to Health and Disease. By GEO. M. BEARD, M. D. New York: D. Appleton & Co. 1874.

PHOSPHORUS; its Claims as a Therapeutic Agent. By WM. M. TURNER, B. Ph., M. D. Philadelphia. 1875.

ON THE INFLUENCE OF SURROUNDINGS. By JOS. O. HAMILTON, M. D., Jerseyville, Illinois, President of the Illinois State Medical Society, 1871–2. Chicago: Fergus Printing Company. 1872.

THE BETTER WAY; or, Considerations upon the Natural System of Providing for the Treatment of the Insane. By ANDREW MCFARLAND, M. D., LL. D., formerly President of the American Association of Superintendents of Hospitals for the Insane; Physician to the Illinois State Hospital for the Insane, etc., etc.

ICHTHYOSIS ON THE TONGUE AND VULVA. By ROBT. F. WEIR, M. D., Surgeon to the Roosevelt Hospital, etc. New York: D. Appleton & Co. 1875.

LEGAL RESPONSIBILITY IN OLD AGE, Based on Researches into the Relation of Age to Work. By GEO. M. BEARD, M. D., Member of the New York Society of Neurology and Electrology, etc., etc. New York: Russell. 1874.

THE ADVANTAGES OF TORSION AS A MEANS OF ARRESTING HÆMORRHAGE. By E. T. EASLEY, A. M., M. D., Member of the American Medical Association, etc. Dallas, Texas: Herald print. 1874.

CEREBRAL AMAUROSIS, and its Connection with Diseases of the Kidneys. By J. H. Buckner, M. D., Cincinnati, Ohio.

CLINICAL CONTRIBUTIONS. Three Cases of Induration of the Os and Cervix Uteri, the Result of Syphilis. Two Cases of Syphilitic Insanity. Four Cases of Anomalous Localities of Chancres — Extra-Genital—With Remarks. By M. H. Henry, M. D., Surgeon-in-Chief of the State Emigrant Hospitals, Ward's Island, New York, etc., etc. New York: F. W. Christern. 1874.

Annual Report of the Officers of the Mississippi State Lunatic Asylum of the State of Mississippi, for the year 1874.

Annual Report of the Memphis Board of Health.

Ohio State Medical Society. Report on General Paralysis, 1874. Report on Monomania, 1874. Report on Dipsomania, 1873. By D. A. Morse, M. D., London, Ohio.

A Series of Medical Clinical Lectures. Edited by E. C. Seguin, M. D. Volume I., No. III. Pneumo-Thorax. By Austin Flint, Sr., M. D., Professor of the Principles and Practice of Medicine in Bellevue Hospital Medical College, New York.

CLIMATE AND DISEASES OF THE GULF COAST OF THE FLORIDA PENINSULA, with Remarks on the former in Relation to Pulmonary Tuberculosis. By J. P. WALL, M. D. Charleston: H. P. Cooke & Co. 1874.

HALF-HOUR Recreations in Popular Science. The Ice Age in Great Britain. By Professor Geikie. Coal as a Reservoir of Power. By Robert Hunt, F. R. S. The Circulation of the Waters on the Surface of the Earth. By H. W. Dove. On Yeast, Protoplasm and the Germ Theory. By Thomas H. Huxley, F. R. S. The Relations between Matter and Force. By Professor John H. Tice, of St. Louis, Mo.

ANALYSES of One Thousand Cases of Skin Disease. By L. Duncan Bulkley, A. M., M. D., Physician to the Skin Department, Dermilt Dispensary, New York, etc.

FŒTAL PHYSICAL DIAGNOSIS. By Frank C. Wilson, M. D., Visiting Physician to the Louisville City Hospital.

PSYCHICAL OR PHYSICAL. By C. H. HUGHES, M. D., St. Louis, 1874.

A PAPER ON SMALL-POX. Read before the Medical and Chirurgical Faculty of Maryland. By J. S. Conrad, M. D., Resident Physician at Marine Hospital, etc. Baltimore: Innes & Co. 1874.

THE TONER LECTURES—Instituted to Encourage the Discovery of New Truths for the Advancement of Medicine. Lecture III. On Strain and Over-action of the Heart. By J. M. Da Costa, M. D., Professor of Practice of Medicine in Jefferson Medical College. Washington: Smithsonian Institue. 1874.

PHILOSOPHY OF UTERINE DISEASE. By Thomas Addis Emmet, M. D., Surgeon to the Woman's Hospital of the State of New York. New York: D. Appleton & Co. 1874.

DIVULSION IN STRICTURE OF THE URETHRA. By Samuel Logan, M. D., Professor of Anatomy and Clinical Surgery, University of Louisiana.

MORTALITY EXPERIENCE OF AMERICAN MISSIONARIES. By Nathan & Willey. 1874.

RETENTION OF URINE. By Alexander W. Stein, M. D., Attending-Surgeon to Charity Hospital, etc. New York: D. Appleton & Co. 1874.

VAGINO-CERVIPLASTY in Lieu of Amputation of the Cervix Uteri, in Certain Forms of Intra-Vaginal Elongation. By Montrose A. Pallen, A. M., M. D., Lecturer on the Surgical Diseases of Women in the Medical Department of the University of New York. New York: William Wood & Co. 1875.

THE MUTUAL Relations of Druggists and Physicians. By Charles E. Buckingham, M. D., Professor of Midwifery and Medical Jurisprudence in the Medical Department of Harvard University. Boston: David Clapp & Son. 1874.

ANNUAL Address of Claudius Mastin, M. D., with the Proceedings of the Society of Alumni of the Medical Department of Pennsylvania. 1874.

PRISON Discipline and Penal Legislation. By J. Berrian Lindsley M. D., D. D. 1874.

A TREATISE on the Hot Springs of Arkansas. By Dr. A. S. Garnett.

AN ADDRESS on the Climatology of Florida. By A. S. Baldwin M. D., President. 1875.

NOSE, Throat and Ear—Instruments and Remarks. By Thos. F. Rumbold, M. D.

COCAIN, VERATRIA, AND GELSEMINUM. Toxicological Studies. By I. OTT, Easton, Penn. Philadelphia: Lindsay & Blakiston. 1874.

MISCELLANEOUS.

"Non omnes eadem mirantur ament que."

Homœopathy.—Dr. John C. Peters, in his address on "Sects in Medicine," delivered before the New York Medico-Legal Society, says: "The Tartar physicians, or Llama doctors, have long superseded infinitesimal doses, as, if they do not happen to have any medicine with them, they are by no means disconcerted, for they merely write the name of the remedy they wish to give on a little scrap of paper, moisten this with the saliva, roll it up into a pill, which the patient tosses down his throat with the same perfect confidence as he would aloes, assafœtida, or any other remedy. To swallow the name of the remedy, or to take the medicine itself, say the Tartar physicians, by any

patient, comes to precisely the same thing. If paper is not at hand, the name of the drug is written with clay or chalk upon a board, which is then washed off, and the patient swallows the liquid."

Some of our physicians even dispense with this formality, and do not give any medicine at all. They certainly have the advantage over the Tartar doctors, as they save themselves some trouble and do not run the frightful risk of misspelling the name of the drug and perchance killing the patient.—*Med. Record.*

Obstetricians Attention!—Strategy vs. Strength.—According to the "Cincinnati Medical News," a Spanish physician, J. Fuentes, resorted to the following expedient in a forceps case. He says: "It was during the night, at an hour unseasonable to call for assistance of a colleague; after fruitless attempts, my strength was entirely exhausted. I was all in a perspiration, and inexpressibly fatigued, when a practical idea occurred to my mind. I remembered how the wire-makers pull the copper for wire. I procured at once a strong belt, which I fixed around my waist, and in it I hooked the free handles of the forceps that had been properly applied; then, holding my knees against the bedside and pulling methodically together with my waist and arms, I succeeded easily in bringing out the fœtus alive and free from injury."

Medical Responsibility in England.—Dr. Davey inoculated himself with syphilis in the index finger in a case of labor. Not knowing the character of the affection, he delivered another patient to whom he thus accidently imparted the disease. Having subsequently recognized in himself the manifestation of secondary symptoms, he hastened to inform his patient and her husband of the unfortunate *concours* of circumstances. Notwithstanding this act of loyalty, he was arrested and sued for damages. The verdict is not yet rendered.—*L'Union Med. du Canada.*

Management of Hydrocele.—Mr. E. Lund, of the Manchester Hospital, in a recent report, says "the secret of success in the management of hydrocele consists in thoroughly distending the sac of the hydrocele, by first noting the number of fluid ounces of serum drawn off, and then injecting at least one ounce more of port wine, so as to thoroughly expand and fill the sac."—*Ex.*

Cancer from a Clinical Standpoint.—The following are conclusions drawn by Professor Nussbaum ("Müncherer ärztlich. Intell. Blatt") at the close of a very interesting discussion of this subject: (1) Cancer is a hyperplasia of the epithelium which extends toward, and crowds upon the connective tissue, produces ulceration on very slight irritation, debilitates the person by hæmorrhages and ichorous discharges, and finally its particles extending throughout the entire body, cause similar growths and destructive changes in other organs and subsequent death. (2) Amongst its causes we must reckon advanced age, mental anxiety, and grief; besides this all those tissues (as warts, cicatrices, etc.) which occupy an intermediate position between epithelium and connective tissue predispose to it; finally those parts which are often irritated but in which no acute inflammation has occurred, are frequently attacked. Cancer is not hereditary, and is not contagious. In the beginning it is purely a local affection, and becomes a dyscrasia only after extension. (3) Humoral infection is to be distinguished from the cancerous dyscrasia. The former may entirely disappear and never contra indicate an operation. (4) The recurrence of cancer is either continuous, as when the elements have not been entirely removed; or regular, if the neighboring morbid tissues be disposed to the formation, or when some of the particles have been carried through the circulating medium to a distant part of the body. (5) Cancer is radically curable by an early an extensive operation. (6) According to carefully computed statistics, patients who have been operated upon live considerably longer than those in whom this procedure has

been omitted. (7) All remedies acting on the tissues, on the nerves and blood, should be considered definitely in deciding upon treatment. First in rank, we place an extended operation. Caustics are often useful especially after removal of the growth. Iodine, arsenic and cundurango are all valuable for internal administration. We have derived decided benefit from parenchymatous injections. Disinfectants and narcotics are often indispensable agents.—*All. Wiener Med. Zeitung.*

Vivisection.—The question is a much larger and more difficult one than is generally imagined. Sir Henry Thompson has lately called attention to some causes of physical suffering to the lower animals quite outside and apart from the practices of physiological and anatomical experimenters, which can not be ignored as if they had no existence; and one at least of the Bills already presented to Parliament shows the incompetency of its framers to appreciate the bearings of the subject. The fact is, that a question of this kind is not, and can not be, circumscribed within the limits of the term vivisection. Some deliberate expression of opinion is, at any rate, called for on such subjects as aristocratic pigeon-matches and stag-hunting, as followed in this country, for example, which seem to us cruel and reprehensible sports, without anything to justify them beyond the fact that they happen to be fashionable, and serve to minister to the selfish gratification of those who participate in them.—*Lancet.*

Ergot in Cystic Paralysis.—Dr. J. Willimsky ("Centralblatt für Chirurgie") made some experiments with ergot upon the bladders of dogs and rabbits, in which he observed that immediate contraction of that organ ensued, and continued for several seconds. He afterward employed it in the form of injections of the fluid extract in two cases of paralysis, with the following results: The first was a marked paralysis occurring in a maiden lady of forty-six; division of a cicatrix between the posterior wall of the bladder and the neck of the uterus proved ineffectual. A small quantity of the fluid extract was then injected daily into the previously cleansed bladder,

and a complete cure effected in fourteen days. The second was a case of acute cystic catarrh with inability to completely empty the bladder. Three injections at intervals of twenty-four hours afforded entire relief.—*Ex.*

MEDICAL NEWS.

'Nulla dies sine linea."

An autobiography of Dr. A. B. Granville, a well-known English physician, has recently appeared in London. An Italian by birth, he was, by turns, an actor, a surgeon to a Turkish fleet, a supercargo of a Venetian polacca, assistant surgeon to an English man-of-war, a dramatic critic and lecturer on Chemistry. He was the first to perform ovariotomy in England.—*Med. and Surg. Rep.*———*Dr. Susan Dimock.*—The wreck of the steamship Schiller brought upon the Profession the loss of Dr. Susan Dimock, one of the most promising of the female members of the Profession in America. From an appreciative obituary notice by Dr. Mary Putnam Jacobi, in the "Medical Record," we extract the following notice of her: "Dr. Dimock graduated with honors at Zurich, after the prescribed four years' term of study. Her thesis was written on the cases of puerperal fever she had had an opportunity of observing in the wards of the hospital. She has been practicing medicine in Boston a little over two years, but in this short time has already won for herself a deserved reputation among some of the best surgeons in the city. As resident physician at the New England Hospital, she has already performed many important surgical operations. She had a certain flower-like beauty, a softness and elegance of appearance and manner, such as is abundantly lacking in the women most eager to denounce surgical accomplishments as outrageously unfeminine. I have wondered whether she did not resemble Angelica Kaufman. Underneath this softness, however, lay a decision of purpose, a Puritan austerity of charac-

ter that made itself felt, though unseen. 'She ruled her hospital like a little Napoleon,' said a lady who had been there under her care. The ideal steadfastness, which is only possible in characters of this kind, was shown to me at my first interview with her, when she came—a girl scarcely out of her teens —to Paris, on her way to Zurich. We urged her to spend a few days in the capital, for the sake of the recreation to which American students usually consider themselves entitled before they settle down to their studies. Miss Dimock alone refused, for the reason, which she gave with the utmost frankness, that she had been obliged to borrow money in order to prosecute her studies, and should not feel justified in spending a cent of it for amusement or sight-seeing. She put forward all amusements into the future, until she should have won her university degree, and should have fulfilled a pledge of hospital service in Boston. Towards this horrible voyage of April, 1875, converged the pleasurable anticipations of nearly seven years. Among all the bright lives that have been engulfed in this dreadful shipwreck, none is more valuable than hers. Perhaps no woman's life of equal social value has met this tragic fate since the body of Margaret Fuller was washed ashore."—*Med. and Surg. Reporter.*

The "Student's Journal" mentions a case of death from inhalation of ether, stated to have occurred in Manchester. The case is not officially reported.———A well known and ably conducted medical journal, the "Deutsche Klinik," which first appeared in 1840, has come to an end with the life of its founder and editor, Dr. Alexander Göshen.———The German surgeons held their fourth annual Congress in Berlin, under the Presidency, as heretofore, of Professor von Langenbeck. The meetings commenced on April 7th, and ended on the 10th.——— At a meeting of the Council of University College, Sir Henry Thompson was appointed Emeritus Professor of Clinical Surgery, on his retirement from the duties of the hospital. The post is not to be altogether devoid of duty.———A new variety of special journal has appeared in France, "The Annals of the

Disease of the Ear and Larynx."———A committee, consisting of Professors Hildebrandt, Litzman, Martin, and Spiegelberg, met in 1873, at the instance of the Prussian Government, to agree on the principles of a new hand-book for midwives in the kingdom. The preparation of the work was entrusted to Professor Litzman, who has completed it.———*The Result of Experiment on Animals.*—Dr. Ogilvie Will publishes in the "Edinburgh Medical Journal" for April a very interesting case of strychnia poisoning successfully treated by chloral hydrate. Interesting in many ways, it is especially so as one of the earliest practical applications to the saving of life and mitigation of pain of the latest researches on animals of the Edinburgh Committee, on behalf of the British Medical Association, for which last year's grant was appropriated.—*British Med. Jour.*———*Scientific Research.*—In the course of his recent Faraday Lecture on Liebig's Contributions to Experimental Research, Dr. Hofmann especially pointed out that Liebig's first experiments on alcohol, and the action of chlorine upon it, led to the discovery of chloral and chloroform, two compounds now in continual use for the alleviation of humun suffering; an illustration of the practical advantages ever following the pursuit of truth.—*Ib.*

EDITORIAL.

"Nullius addictus jurare in verba magistri."—Hor.

THE NEW YORK TROUBLE.—The Board of Trustees of the Presbyterian Hospital, of New York City, have recently ejected from the Staff of Attending Physicians, Drs. A. B. Ball, Geo. Wheelock, G. H. Wynkoop, and W. DeF. Day. These gentlemen, it is said, are wholly unexceptionable, but did not (on dit) suit the Chief Matron having charge of the hospital. The Board then filled the vacancies thus created by the election of

Drs. S. T. Hubbard, G. M. Smith, F. A. Burral, and V. S. Wooley.

The leading physicians of New York have justly signed and forwarded a protest to the Trustees, declaring that while no one assumes to dictate what officers shall be elected by them, that it is due to the Profession, to the hospital and staff, to the Public, to the patients, to decorum and justice, that members of a staff should not be summarily displaced, without the reasons for such a course being given. Public sentiment justly condemns those physicians who occupy positions thus vacated.

It is time for the Profession to act in this connection, for it has rights that should be respected. In New York, they are trampled upon by the guardians of public institutions. When such places are sought, and not offered, this must be the case; office-seeking, sycophancy, "electioneering," etc., lower the Profession very naturally in the estimation of the Public, and these outrages are the necessary and natural result. If the Profession will respect itself in this connection, it will be always respected. Apart from these facts, however, the ejection of these officers, "without rhyme or reason," is an outrage, and the Profession are right in making a full and absolute issue in the premises.

TRANSACTIONS OF THE KENTUCKY STATE MEDICAL SOCIETY.—It is a source of regret that the Transactions can not appear in this number of the Journal. They are very voluminous, and were not received until the latter part of the month of May, instead of reaching this office, as usual, in the early part of April. It is just to the present Secretary, Dr. J. W. Singleton, to say that this delay is due to a sad death in his own family. The late Secretary, Dr. J. A. Larrabee, who has hitherto furnished these papers with promptness and fidelity, has endeavored to obtain them in time this year, but, with his best efforts (for which he has the thanks of this Journal) the papers have been received, when the space in the Journal was fully appropriated by material earlier reaching this office.

End of Volume Nineteen.—This number closes Volume XIX; leaving but six months more to bring this Journal to the end of its first decennial. As the close of a volume constitutes always an appropriate opportunity for making a few informal statements in regard to the work, the present occasion will not, for this purpose, be neglected.

The commencement of the "American Medical Weekly" in July, 1874, induced many to suppose that the Monthly Journal would be neglected; but little was said at that time in this connection, as it was deemed best that time should be the test. Subscribers have now had a year in which to determine whether this anticipation was just. The correspondence of the Monthly shows that at no former period of its history has the work been more satisfactory to its supporters. The expenditures on the Journal have been more liberal, and its foreign correspondence is not only appreciated by the subscribers, but is often quoted by the Medical Press of this country. The contributors to the work represent the best talent and position of the Profession, and at no time since the Journal was founded has it been so abundantly supplied with contributions of the very best character. These papers can not do otherwise than make the next volume very valuable.

The financial pressure which is bearing down some of the oldest and best Houses in this country has, of course, been felt, but the supporters of the Journal, it is fair and pleasing to say, have endeavored to lessen this as far as possible. As the Journal is published on a cash basis, the present occasion offers an appropriate time for appealing to those who have forgotten the trials and cares of an editor and publisher, and for asking them to (as soon as this is read) lighten the labors of a professional brother by doing what it is unnecessary to describe; but what each reader particularly here addressed will so well understand.

Offering once more to the supporters of the Journal thanks for the past and the best services for the future, this volume is sent to take its appropriate place beside its predecessors.